

DECEMBER, 1964

AIRFIX

magazine FOR PLASTIC MODELLERS

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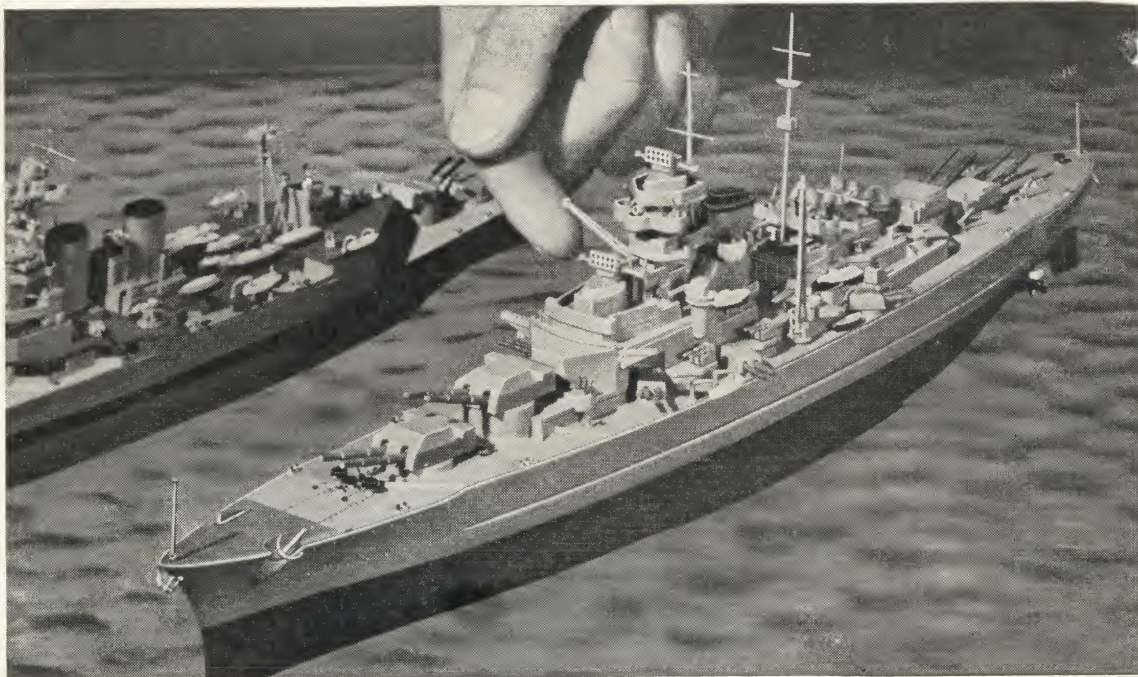
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ISSUE

New Mauretania, Suffolk and more loco kits
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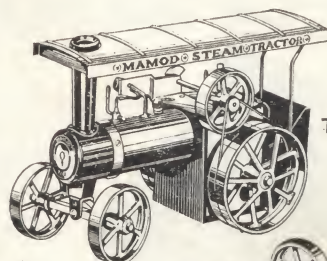
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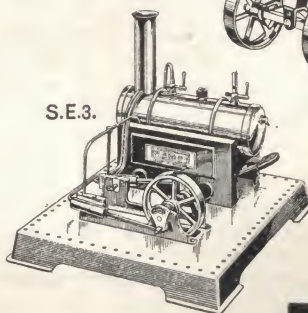
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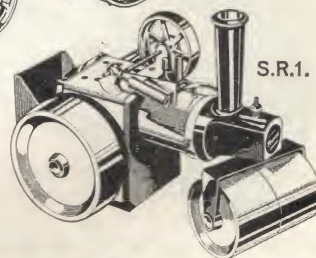
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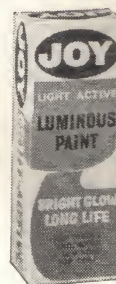


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Airfix Magazine

AIRFIX

magazine

FOR PLASTIC MODELLERS

Volume 6, Number 4

December, 1964

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COVER PICTURE

A striking view of the giant 91,600 ton Italian super-tanker *Carlo Cameli* on the slipway before her launching. She is powered by a Fiat 9012S diesel motor, one of the largest and most powerful engines of this type ever constructed. A full description of the vessel appeared in *A. J. Day's Shipping Notes* in our September issue.

Editorial Director **JOHN BLUNSDEN**
Editor **DARRYL REACH**
Art Editor **MICHAEL ROGERS**
Advertisement Director ... **PATRICK STEPHENS**

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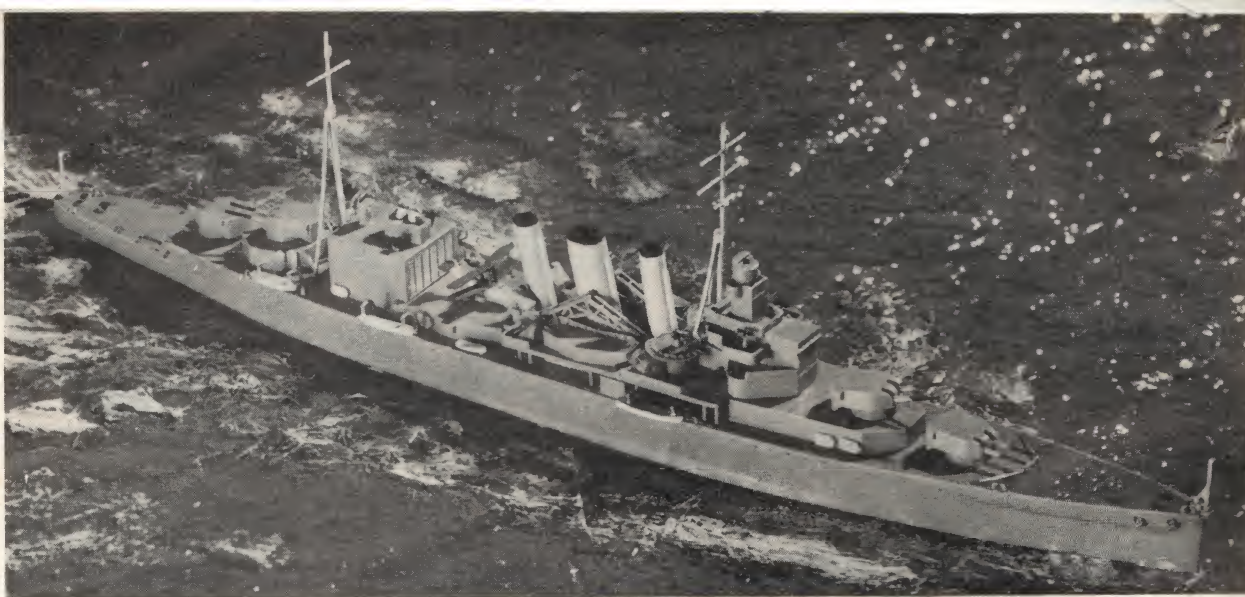
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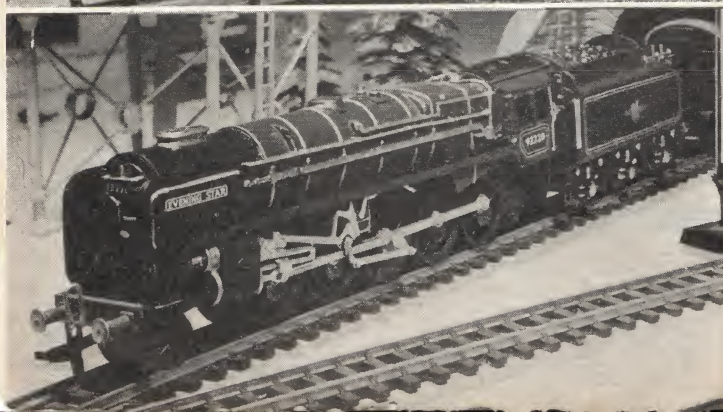


Latest warship kit from Airfix is this 1:600 scale Suffolk. Comprising 128 parts, it costs 4s 6d.

NEWS FROM **AIRFIX**

The world's greatest value in construction kits

The two latest Airfix OO/HO scale loco kits depict the beginning and end of the steam era on Britain's railways. The Rocket costs 2s and the Evening Star 6s.



1:600 scale Mauretania and Suffolk

**PLUS OO/HO SCALE EVENING
STAR AND ROCKET KITS**

MODEL locomotive and ship-building enthusiasts who have been eagerly awaiting further new releases will now have more than enough to keep them busy, with the latest Airfix kits. They include two 1:600 scale ships — the liner RMS *Mauretania* and the cruiser HMS *Suffolk* — and OO/HO scale replicas of the 2-10-0 *Evening Star* and Stephenson's *Rocket* locos.

Joining the Famous Liners series 4, the *Mauretania* is colourfully boxed and costs 6s, including full assembly and painting instructions, cement, flags, a seven-item colour transfer sheet and a display stand. Accurately moulded in great detail, the white plastic parts fit together exceptionally well to produce an impressive replica of this famous ship. Lifeboats, davits, anchors, cowls, companion ways, cranes, derricks, masts and the four distinctive funnels are all carefully reproduced, while fine moulded detail depicts such items as anchor chains, portholes, deck planking, doors and windows. Below the waterline are featured the propellers, rudder and twin bilge-keels, and above it 'tower' the seven decks of this great Cunarder.

Built at the Wallsend-on-Tyne yard of Messrs Swan, Hunter and Wigham Richardson Ltd, the *Mauretania* was launched in September, 1906. At that time she was one of the most advanced ships afloat, her powerful steam-turbine engines being something new in the super-liner world. In 1907, when she first saw service, she broke all existing Atlantic speed records and took the coveted Blue Riband

from the SS *Kaiser Wilhelm II*. For over 22 years she reigned supreme as the fastest of the North Atlantic liners. At one time, she averaged 25½ knots for 27 consecutive voyages. Her last crossing was made at the end of September, 1934, and she was finally broken up at Rosyth in 1935.

Powered by 70,000 hp Parsons turbines, she was driven by four 16 ft 9 in diameter propellers and on her trials averaged 27.4 knots over a distance of 300 miles. With a length of 790 ft and a breadth of 88 ft, the *Mauretania* weighed 31,938 gross tons. The 139-part Airfix model is 15¼ in long.

HMS SUFFOLK

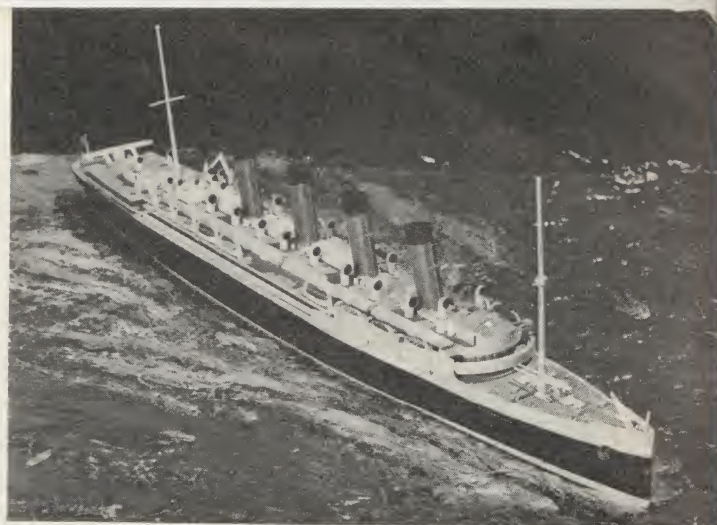
SECOND of this month's nautical releases, the *Suffolk* joins the *Tiger* and *Devonshire* in the Famous Warships series 3, priced at 4s 6d. Packed in a full-colour box, this 128-part kit includes comprehensive painting and assembly instructions and has a number of interesting features. The four main gun turrets revolve and each of the miniature 8 in gun barrels elevates independently. The two main crane jibs also elevate and the eight 4 in gun barrels may be cemented at any desired angle. Deck detail is finely reproduced, together with anchors, chains and bollards. Also featured on this 12½ in long replica are a Walrus spotter aircraft mounted on a 'catapult', two cutters, a motor boat, four whalers, a speedboat, a gig, life rafts, searchlights, pom-poms and gun-directors. Below the waterline are a miniature rudder, four propellers and torpedo bulges.

One of the Kent class cruisers, the *Suffolk* was ordered under the 1924-5 navy estimates, built at Portsmouth dockyard and launched in 1926. Designed not so much for outright speed as for first-rate sea-going qualities and strength, the ships of this class were able to keep to their designed speed in all weathers. Heavily armed with eight 8 in quick-firing guns and a variety of smaller weapons, they were extremely successful in service. Between 1935 and 1938 the Kent class cruisers were all reconstructed, the *Suffolk* being extensively altered. An aircraft hangar was added, a catapult installed, new anti-aircraft guns fitted and, to compensate for all this added weight, her hull was cut down aft. She was finally scrapped, after 22 years' service, at Newport in 1948.

Suffolk had a length of 630 ft, a beam of 68 ft and displaced 9,800 tons. She could carry four aircraft, had a normal complement of 679 and was powered by Parsons geared turbines of 80,000 shp, giving her a speed of 31½ knots.

2-10-0 EVENING STAR

STAR item of the two latest locos is undoubtedly No 92220, *Evening Star*. Another revised release by Airfix of a former Kitmaster kit, it embodies virtually all the detail and moving parts of the prototype. Though this is not the easiest of models to build, it is for that reason one of the most rewarding when finished. The black plastic mouldings of this 94-part kit fit together very well, but close attention must be paid to the instructions. The working valve gear is particularly intricate. Footplate control and boiler detail is good, while the etched rivet lines, leaf springs and axle boxes on the tender are very pleasing. Included in the kit, along with cement and an 18-item colour transfer sheet, are a choice of couplings — scale or working 'buckeye' units. The front bogie is pivot-mounted, while the tender coupling has a double adjustment — the tender may be coupled close up or allowed to trail slightly. Price of this realistic OO/HO scale replica is 6s.



A 15¼ in long 1:600 scale replica of the *Mauretania*, comprising 139 parts and selling for 6s, has now been added to the Airfix range of Famous Liners.

Last steam locomotive to be built for British Railways, the *Evening Star* was named at Swindon on March 18, 1960, in a ceremony marking the end of an era in rail power that had lasted for over 150 years. Destined to end her days in retirement in Swindon's Railway Museum, No 92220 is assured of escaping the fate of so many other steam locos, the breaker's yard. The Airfix model is 10½ in long.

STEPHENSON'S ROCKET

RELEASED at the same time as a model commemorating the end of the steam era is one that surely reminds us all of its beginning. It is a 2s, 51-part kit of Stephenson's Rocket. The yellow plastic mouldings fit together so well that a minimum of cement is needed to make an extremely strong miniature. The wheels revolve easily, yet without wobble, and the connecting rods move with realistic smoothness. Etched detail is good, plank and rivet lines being minutely picked out. A tender is included and has a pivoted coupling to the locomotive itself. On the tender is carried a load of 'coke' and a large water barrel. Another refinement on this cute little model is the crew of two, both dressed in period costume and in 'hard-at-work' poses.

Built at the Newcastle-upon-Tyne works of Robert Stephenson and Co, the *Rocket* was designed by George Stephenson, with construction supervised by his son Robert, to compete in the Rainhill trials of 1829. At the trials, each engine entered had to make ten trips up and down a 1¼ mile level stretch of the line carrying a load of three times its own weight. After a pause for refuelling it had to repeat this performance. *Rocket* averaged 16 mph and used only half a ton of coke for the 70 miles. This feat earned the Stephensons the £500 prize for the trial. The Airfix model of this famous little loco is 3½ in long with its tender and is a nostalgic reminder of a by-gone age.

LATEST CATALOGUE

THE 1965 Airfix kit catalogue is now on sale in model shops, price 9d. With a distinctive colour cover, it includes pictures and information on no less than 213 different kits in 36 series, some of them yet to be released. This is the third edition of this popular publication and should be in heavy demand.



Named Basset CC Mk 1 by the RAF, 20 of these militarised Beagle B206s are on order, for delivery commencing in 1965. At present two aircraft of this type are in the Middle and Far East on sales tours.



WITH Beagle aircraft going off round the world on sales tours, I thought it about time that I visited their works to have a closer look at the Beagle pack, as we have come to know these light-club-executive aircraft and their distinctive colour schemes. G-ASOF is on its way to Australia, while G-ASMK, another B206, is doing a tour of the Middle East. Both aircraft have been putting in some impressive flying, and it is to be hoped that sales will result from their ventures.

My immediate aim, however, was to see the aircraft at Shoreham which, although not the production line, (that is based at Rearsby, in Leicestershire) does cope with a great deal of the test-flying programme. This programme, to which the B206 has been subjected, has been both exhaustive and exacting. Having its counterpart in the world of airliners and military aircraft, it has been the most testing for any light aircraft. I was shown some of this work and it made me wonder if this isn't taking things a little too far. The safety of an aircraft in flight is paramount,

but with an aircraft like the Beagle B206, which has to be in competition with the all-embracing American sales from Cessna, Piper and Beech, the final retail price must surely be affected. It would be different if, at this stage, the company had sold several hundred aircraft of the type, but I would say that this looks a little remote when the Americans are manufacturing six or seven aircraft in the same class every day.

I saw the prototype of the RAF version of the Beagle B206 (XS742), which has now been named the Basset, undergoing a major inspection and I can testify to the strength of this aircraft's construction. It is, without doubt, built like an airliner, and I am sure will sell admirably where the purchaser wants an aircraft to last for ever. 'Built like a battleship' is an apt expression, and the 20 aircraft ordered for the RAF will have an all-up weight of some 7,500 lb each, compared to 5,200 for the Cessna 310, its American equivalent.

All this brought me to the point of wondering whether or not it is a wise move to produce an aircraft which has so much competition from established names in the executive aviation field. Beagles, however, are not completely without sales experience and, as most of us know, have now developed the earlier Beagle 218 into the B242. Here we have an aircraft which I know will be a world-beater. It has only one rival, the Piper Twin Comanche, and I'm told that it can hold its own very well against any competition. The prototype B242 has only recently flown for the first time, but I am sure that with this aircraft an ample slice of the world market can be gleaned.

The average businessman travels by commercial airliner today, and seems very satisfied with the service provided. Many firms, however, could benefit by having their own aircraft available for the executive who regularly needs to travel to areas not serviced by the airlines. Not all commercial enterprises have their factories or depots in Glasgow, Edinburgh, Manchester, Birmingham or Newcastle, for example.

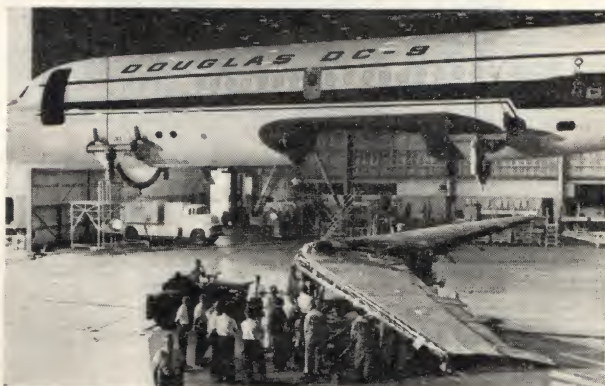
Businessmen are hard-headed people. They want to be at a certain place on time, and the old expression, 'If you've time to spare go by air', still lingers on. The pundits say that, providing the facilities of radar and airfield approach aids are available, then executive aircraft can be flown with the same regularity as the modern jet airliner. Perhaps this is true, but it's just one more of those vicious circles. Once the numbers of executive aircraft in the air are great enough and they are being used regularly, then the facilities for their acceptance by Air Traffic Control can be met at the smaller, less well-equipped airfields where they more often than not want to go.

This brings us back to the B242. Here, we have an aircraft ideally suited for business use in the United Kingdom. It's the right price, has the right sort of range, can be equipped to fly in all weathers and, above all, can be operated at an economical rate. I would say that Beagles need to go all out to sell this aircraft to businessmen in Britain. Once a firm home market has been established, there is no reason at all why the aircraft should not be sold abroad with exactly the same sort of success.

DOUGLAS DC-9 PROGRESS

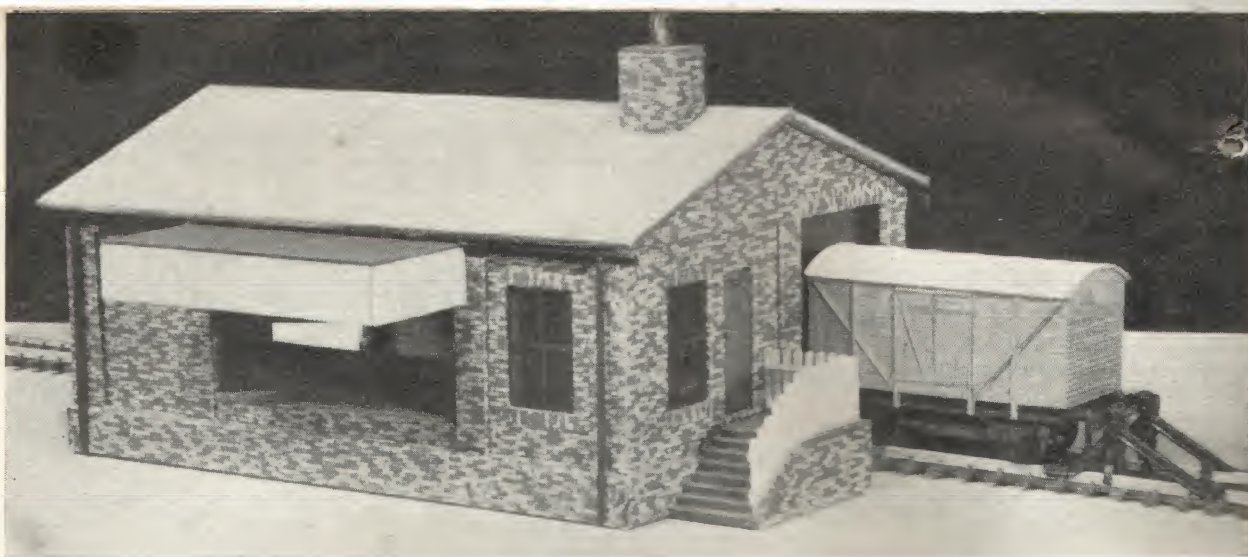
RIVAL of Britain's BAC-111, the DC-9 appears to be catching up fast on its competitor, not only in sales but in construction. The first fuselage was mated to the wings a few weeks ago. This traditional milestone in the production of an aeroplane occurred during the 32nd week of assembly of the twin-jet transport, exactly as programmed some one-and-a-half years ago. The first step was to place the basic wing structure, spanning 84½ ft, into the joining position. Overhead cranes then lowered the 11,200 lb fuselage, minus aft-mounted engines and tail unit, over the swept-back wings. Hydraulic jacks inched wings and fuselage together until four indexing holes were aligned and the two major assemblies were joined structurally.

The number one DC-9 was 75 per cent complete with the wing-fuselage joining. It will be ready for roll-out in three months' time and the first flight is scheduled for March, 1965. Douglas has announced firm orders from six airlines for 54 DC-9s, and options for 44 additional aircraft. Bonanza, Trans World and Delta airlines in the US and KLM, Swissair and Air Canada are the purchasers.



Above right, top to bottom: The Beagle 242 at this year's SBAC flying display at Farnborough. Like most Beagle aircraft it has graceful lines, despite its very utilitarian purpose as one of the few British aircraft really suited for business needs. The Douglas DC-9, now in an advanced stage of construction, is expected to fly in March, 1965. The artist's impression of the aircraft can be compared with the lower photograph showing the recent mating of the wing and fuselage units at Douglas's Long Beach plant. **Below:** Beagle 242, G-ASTX, the prototype, is one of the few executive aircraft on the world's markets that can claim almost no rival. It is designed for 4/5 seat operation over ranges of up to 700 miles. Admirably suited to the needs of the busy British business executive, it should be a top-rate seller in England.





Scratch-built goods shed for OO gauge railways.



LINESIDE BUILDINGS

I MENTIONED last month the possibility of using sheet plastic for model buildings, but since this material for the main structure (as opposed to the detail work) calls for special treatment, I have added a separate section later in this article. For the moment, I will describe my methods of using sheet balsa or card. Most stationers sell card of varying thicknesses, and a fashion or poster board of about 1/16 inch thickness is most useful for our purposes. I favour card myself; quite apart from the cost (at about 1s 9d for a large sheet it is much cheaper than balsa) there is no tendency for it to split along the grain and, if it is treated with shellac, it is quite as strong as balsa of equivalent thickness. If you do use balsa, I strongly recommend you to shellac it and to use Uhu rather than balsa cement.

The shell of any building is cut from card or balsa, and the window and door openings are cut out. Remember to seal all the surfaces and edges with shellac—it is no good having the faces of the material protected and leaving the edges open to absorb the damp. The shell is assembled round a floor and a false roof and, if the building has a number of storeys, the various floors are put in as well. I also put in certain of the interior walls and partitions because I hate being able to see right through a building which should be divided up into rooms. This avoids that tell-tale 'see through' look which spoils so many model buildings. The floor should have as generous an access hole as possible, and I paint the inside of all walls with a dark neutral colour, leaving the ceilings white or natural balsa colour. This may sound fussy, but it is surprising what a difference it makes to the look of the finished building.

So much, in broad outline, for the inside—now for the external treatment of the walls and the roof. For brick or

stone buildings, this usually means the application of a building paper, unless you are prepared to go to the monumental length of covering your walls with individual bricks. This method, shown to perfection in the quite magnificent models of the Iliffe Stokeses, is quite beyond the scope of this article. It is worth remembering, however, that Fallers produce a series of embossed building cards in a variety of finishes. Quite naturally, these are a lot more expensive than the more usual brickpapers, but the resultant finish is certainly good and the extra expense is worth consideration for a building which is likely to become the focus of attention on a layout.

The whole of any wall should be covered with the brickpaper, ignoring any windows and doors. Then the paper across the openings should be cut on the diagonals and the four resultant flaps should be glued back inside the building. This means that the inside edges of the openings are neatly covered with brickpaper. Sills and lintels can be added in thin card and stone sills are well represented by strips of manilla envelope glued *rough* side outwards.

Windows can make or mar a model. For background effect you can sometimes get away with printed representations (there is a sheet of windows and doors in the Merco range of building papers, sold by Hamblings, of Cecil Court, Charing Cross Road, London WC2) and all the Biltzezi construction sheets have windows printed in. But in general I think it better to model windows and doors properly, wherever the building is going to be on the layout. This naturally takes longer, but the results are worth the extra effort. The best glazing material, I find, is rigid perspex, about 1/16 inch thick. On to it are scribed or drawn both the framing and the sash bars. The frames can be scored on to the perspex with the point of a scribe; the scratches are filled with a suitable colour paint and the surplus, which will not adhere to the unmarked perspex, is wiped off. But an even better way is to rule in the framing and the sash bars, using a bow pen and diluted paint. Adjustment of the pen allows you to vary the thickness of the framing, and you get a raised effect from the lines on the surface of the perspex.

There are, of course, external finishes—other than stone or brick—which can be modelled quite easily. The rough side of a cheap manilla envelope gives a good representation of stucco, and tongue and groove boarding can be simulated by scoring the walls. This last method, however,

does weaken the main shell of the building quite considerably, and it is preferable to add the planking as an extra layer on the outside of the building. Scale board-width strips of notepaper are glued over the walls, starting at the bottom and working upwards to the eaves. I find it best to use a tube of glue such as Croid, Kirkor or Seccotine for this process as you can make adjustments to the boarding as you go along. After you have laid two or three of the boards, take a ruler and a scribe and run along the grooves with the point of the scribe, cleaning out the glue and leaving just a fractional gap between the boards.

You will see now why I use a glue which will allow a certain amount of movement before it sets; an impact adhesive would not let you make these adjustments. It is better to 'plank' over the window and door openings and to cut them out with a sharp knife when the glue has set. Window frames should be put in with stripwood or card afterwards.

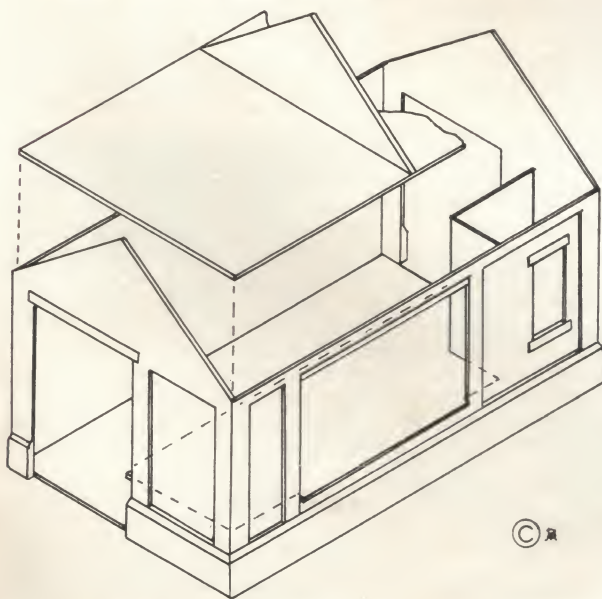
A similar process is used for weather- or lap-boarding, but here *double* plank widths of notepaper are glued on, starting at the bottom of a wall, with each strip overlapping the one below by half its width. With both treatments, the boarding should be shellacked when completed.

BUILDINGS IN PLASTIC

There is nothing to stop you from using styrene sheet for the shells of model buildings except its cost, which is higher even than balsa. In my opinion, it is much too hard-surfaced to represent adequately brick, stone or timber, so it must be covered with a building paper. Here I have found one snag in the normally recommended method of laying the paper on the plastic shell and saturating it with a liquid solvent, such as Mekpak. If the building paper has any sort of sheen or gloss on it, you may find that it appears to stick well at first but, when the solvent dries, air bubbles appear under the paper.

I had this happen with some 2 mm brickpaper on a goods shed I was building, and repeated applications of solvent failed to clear the bubbles. It is worth test-gluing a piece of your brickpaper to a scrap of plastic to see if the same thing

Diagram showing basic method of scratch building.



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Top: Detail of one end of a small works. **Above:** Small works like this are ideally suited to modelling.

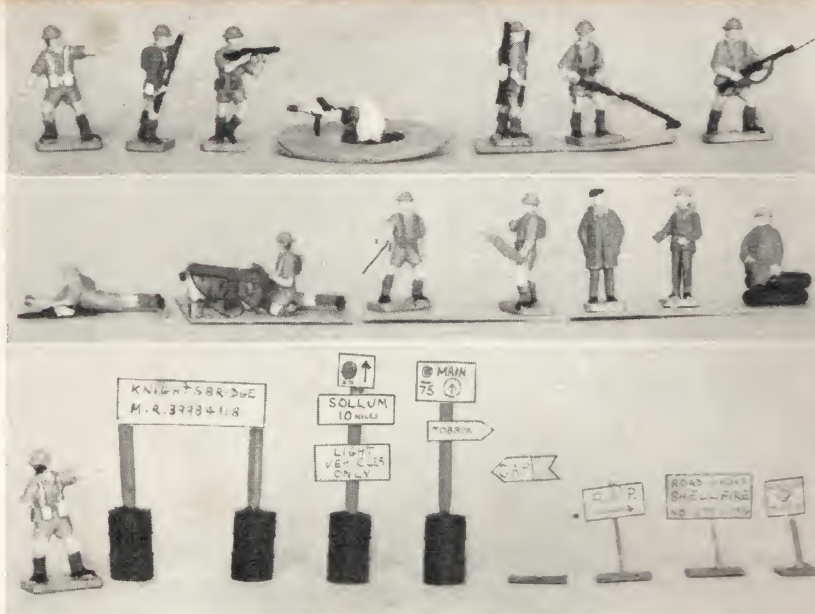
occurs; if it does, use Uhu instead. I must say that I have not had this happen with either Modelcraft or Superquick papers, so they must be more absorbent and the solvent must be able to penetrate them fully.

WORKING FROM PHOTOGRAPHS

Often, of course, you cannot get hold of plans of the buildings you want to model and you are thrown on your own resources. A sketch can sometimes be made, with the odd measurable dimension marked in, from which a more detailed plan can be worked out at home. Photographs are always a great help, because they show far more detail than you could possibly hope to sketch. Used in conjunction with rough sketches and notes, they can provide you with all the material facts you need to make a working plan. Always try to take photographs square-on if possible—this way perspective plays fewest tricks—and always try to include a known dimension in each picture. For example, in the two pictures of the small factory or works, it was possible from the public pavement to pace out the various lengths of the buildings and to measure roughly the widths and heights of the windows and doors.

It was not possible in this case to get a decent square-on view of the building, but with these measurements, and a page of notes about colouring and materials, it was possible to produce a reasonable plan. Had I not been able to take these measurements, the two figures in one of the photographs would have been the starting point for dimensioning. Assume the ladies to be about 5 ft 8 in tall, the height of the front wall would be about 20 ft, the lower windows about 5 ft 6 in, the upper ones 4 ft and so on. Lengths of the frontage would have been difficult to work out from the same photograph because of perspective but, knowing the height of the lower windows to be about 5½ ft, look at the second photo of the far end of the building. This shows the width of the same windows to be just over half their height—say 3 ft—completing the dimensions.

Copyright, Mike Bryant, 1964.



Top to bottom: Some of the figures described in the text (left to right): soldier with blanket webbing; soldier in battle-dress blouse (cut away rolled-up sleeves); sub-machine gunner leaning against parapet, etc; bren gunner in foxhole with white hood; sappers (note cable and bandaged rifle); rifleman with fixed bayonet, here a length of fuse-wire. Foxholes can be made from card discs, the upper one with a hole cut in it. Figure is cut off across chest. More 8th Army types (left to right): NCO with binoculars and bandaged rifle; machine gun team 'super-detailed'; officer with stick; officer with map (both from same figure); tank commander in duffel coat; two officers in non-regulation jackets typical of 8th Army. These last three are converted from Airfix civilians with 8th Army heads. Groups such as sappers and machine gunners are best cemented to card bases. This saves a lot of trouble (and damage) when the figures are being handled. Desert signs (from left): 'Knightsbridge'; direction pointers and route signs; 'Gap'; 'RAP'; 'shellfire'; and German minefield board. All drawn on card, using cocktail sticks or matchsticks for posts. Bases for the big signs are Merit oil drums. 'Knightsbridge' should be white on black background, but has been reversed here for clarity.

Modelling the 8th Army

WHEN modellers take to OO scale plastic soldiers, they require not only detail and accuracy, but also *action*. Those who collect rows upon rows of identical figures prefer the more detailed and pre-painted lead or metal kind. Airfix have recognised this fact by making a large variety of different figures in each of their two-shilling 'S'-series sets. Even so, some duplication of posture is bound to occur, especially if several kits containing the same figures are bought. With little difficulty, however, each little model can be made into an individual.

Fortunately, the plastic used is not rigid, so that the figures can be cut, bent, and sculpted into different postures. Care must be taken, though, to see that the attitudes produced would not be painful in real life! When carrying out these conversions you must use a lot of observation, with a grain of imagination, to be able to obtain realistic poses.

Take, for example, the OO scale combat figures in the Airfix 8th Army set, which contains 18 different types of personnel. The best method of obtaining a desert setting for them is to use silver sand, which is the right colour and texture for the job. Not

A. V. MARTIN SUGGESTS SOME SIMPLE PLASTIC SURGERY WITH AIRFIX SOLDIERS

Models and illustrations
by C. O. Ellis

all of the Western desert was sand, however, and in some cases it would be more effective to use rock and scrub.

Because of the whiteness of the sand, white was sometimes used for camouflage rather than the so-called 'sand' colour, and an interesting example of this camouflage was used by some Bren-gunners for anti-aircraft duties. The Bren-gunner would make a hole in the sand large enough to stand up in, with just his head and shoulders showing. The hole and the Bren-gun were covered with white cloth, and the gunner was similarly attired with a white hood.

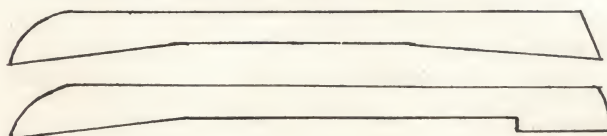
The object of this was to lay in wait for enemy aircraft. When such an aircraft, unsuspecting his presence, passed overhead, he would pop out of his hole and pepper it! In this case, the Bren-gunner is alone, but usually

Bren-gunners are accompanied by a second man who changes the magazines.

The method used by the sappers of the 8th Army for clearing minefields was to lay down a pair of parallel tapes, wide enough apart for a vehicle to pass, and then 'sweep' the resulting path, removing mines as they were found. When the lane was completely cleared, and the first vehicle had gone through, it was progressively widened either side, until the whole field was cleared.

Marking posts were also used. These were about as high as a man's shoulder, and were painted red and white. The white part, with the word 'GAP' painted on it in red, pointed to the clear lane, while the red part indicated the rest of the minefield.

These mine-clearers usually went in pairs, the second man, who also helped with the removing of mines, carrying both rifles. Note, in the illustrations, the cable coming from the mine-detector, and the wrapping on the rifle on the back of the second man. Fine fuse wire (5 amp) can be used for the cable, painted black, and the second rifle (taken from, say, the wounded man) can be painted matt white about the stock and breech.



Shermans issued to the 8th Army were fitted with extended dustguards which covered the top run of the track. Here are full-size templates for two different patterns commonly seen. These fittings were made of flimsy light metal and soon became distorted, ripped off, or partly removed. Thick paper is best for these in model form as it can be given similar treatment! An awning was hitched to a rail welded on one side of the vehicle just above the dustguard, and this was unrolled to form a shelter for the crew, who slept alongside the vehicle during a night leaguer. Use tissue paper for this awning in the model.

8th Army equipment

AIRFIX models at present available restrict the Western Desert campaign to Alamein and after, since the Sherman tank did not appear until this time. The Carrier, 25pdr, Scammell transporter and 6pdr are all eligible, but this latter weapon was the province of A/T Regts RA at the time of Alamein, when it was just entering service. The Quad (without the limber) is the best Airfix vehicle suitable for towing the 6pdr and it was, in fact, used by some units for this purpose.

Airfix conversions so far described in our 'Military Modelling' series which would also find a place in a miniature 8th Army include the various Bren and Universal Carriers, the Scammell heavy breakdown vehicle, Morris 15cwt truck, Morris water truck, and Scammell gun tractor. Vehicles were usually painted 'sand' colour, either plain or with very dark grey, almost black, shading. Humbrol BR interior stone is the nearest ready-mixed colour to 'sand', but being semi-gloss it needs matting.—C.O.E.

When not in immediate use, rifles were often wrapped in cloth in this way to keep the heat of the sun from those parts handled in the firing position. Otherwise, when its owner wanted to use it, he would find it too hot to hold!

Micromodelling

Modellers who use plastic kits in other fields, such as aircraft and rolling stock, often add their own detail to their subjects, to improve realism, and there is no reason why this shouldn't also be done to scale figures. Because of the size, however, detail in this scale is quite difficult, but not impossible. A steadier hand and a little more patience is all that is needed. Perhaps this 'micromodelling' will become a fashionable pursuit! (Plastic modelling itself has become

'respectable' over the last few years.)

Take, for example, the Vickers machine-gun. The magazine-belt can be scored with a blunt edge to simulate the cartridges, but care must be taken to see that the marks are evenly spaced, and that the belt is not cut right through. Secondly, the barrel of the machine-gun had some serrations near the muzzle end. The best way to obtain these is to lightly score the serrations on with a razor-blade, and then make them deeper, and more V-shaped in cross-section, with the blade of a pen-knife.

One thing missing from all these figures is the bayonet, which was extensively used in the Western desert. At the beginning of the campaign, an 18-inch bayonet was used, but since it proved to be something of an encumbrance, it was superseded by the much shorter 6-inch bayonet. To scale, these lengths correspond to 6 mm and 2 mm, respectively. However, a thin sliver of plastic can easily be attached to the rifle, the cement being added to the muzzle with, say, a pin. Either bayonet can be made in this way, but the longer is both the easier and the more effective.

Another point is that Bren-guns have two legs, whereas the models only have one. This can be rectified by cutting the single leg in half with a razor-blade, and then separating the halves with the flat of the blade. This means, however, that the base of the legs will not rest on the ground, but this problem can be overcome

by placing the legs on a piece of raised ground.

An easy change of stance for, say, a sub-machine gunner is to cut both feet away from the base, and then cut the left leg off at the knee. After 'morticing' the cut, the leg can then be re-attached in a bent position, as if the gunner is standing in a trench. If necessary, the base can be retained by leaving the right foot attached to it.

Uniform

In the desert campaign, a certain degree of latitude was apparent where uniform was concerned. The figures in the 8th Army set are depicted on the packet as wearing khaki shirts, but sometimes battle-dress blouses were also worn. Webbing equipment, too, was blanched white in varying degrees. Sometimes only the webbings of water-bottles were blanched, and in other cases the whole of the webbing, including cartridge pouches, rifle slings and belts, were whitened. Thus, by varying the painting of the uniforms of the models, realism can be improved.

Libyan Waterloo

When, during the Libyan campaign, it had become apparent to the 8th Army that a continuous line of defence was unfeasible, they resorted to tactics used in the Battle of Waterloo, namely the British Square, adapted to the peculiar aspect of the campaign. They set up squares, or 'forts', in the desert, which were surrounded by minefields and barbed-wire, and in which the army was concentrated.

German tanks could, at their own risk, go round or surround these 'forts', but the very presence of these squares rendered the conquering of the surrounding desert by the Germans strategically useless, since the enemy could then be attacked from the rear.

These boxes were based at Gazala, Knightsbridge, Bir Hacheim, and El Adem, with the main base at Tobruk. One of the unusual sights to have seen in the desert must have been the signpost at Knightsbridge, which was all that distinguished the base from the surrounding desert! The sign was painted in white figures on a piece of corrugated iron, attached to two posts set in to two oil-drums. It is interesting to note the eight-figure reference. A battle which occurred around Knightsbridge in May, 1942, was described as being 'Waterloo over again'.

With the 8th Army in the desert. Top to bottom: A Sherman waits to move forward along a desert track, while sappers check the path ahead for mines. The tank commander is speaking with an RE officer. A Vickers machine gun team goes into action while the Carrier which brought them forward moves off to the rear. Note the condenser and tubing added to the gun. The plastic has also been cut away in front to give the correct tripod arrangement for the legs. The officer is another example of variation on a standard figure by altering the arm position. A crippled Sherman, victim of an enemy mine is recovered by a Scammell transporter.





One of the Glasgow suburban Blue Trains at Westerton Station. The text gives details of further extensions to this electrified system.

THE Scottish Region have announced a £6½ million plan to extend their successful electrification in the Glasgow suburban area. Having now overcome their initial unfortunate electrical troubles, the Blue Trains have just completed their third year of operation on the Airdrie Helensburgh lines, and are showing a 200 per cent increase in revenue compared with steam. A similar success story has followed the introduction of Blue Trains on the Cathcart Circle in 1962.

Now the Blue Trains are to be extended on the south bank of the Clyde, west of Glasgow, and by mid-1967 they should be providing a regular-interval service along the 37-mile route from Glasgow Central to Wemyss Bay. The electrification is coupled with track, signalling and station modernisation and, of course, a new timetable to make the best use of reduced journey times—such as 45 minutes for the Glasgow to Wemyss Bay service, instead of the 57 minutes it takes now.

Rolling stock will be basically the same as existing Blue Trains, but minor improvements resulting from experience in service will be made to bring them right up-to-date. Only 19 additional three-car sets will be required.

The Scottish Region have thoroughly surveyed the traffic potential of this modernisation scheme and they are confident that the present

and Bournemouth. A total of 80 route miles will be electrified from Brookwood to Bournemouth Central, and the target date for completion is 1967.

For this new service an entirely new method of 'push-pull' operation has been devised. Twelve-car trains of three four-car multiple-unit sets will have driving controls at each end, but the driving motors (totalling 3,200 hp) will be concentrated in one unit, which will push from the rear of the train as it leaves Waterloo. On reaching Bournemouth Central, the two four-car units at the front of the train will be detached and they will be pulled by a Type 3 diesel-electric locomotive for the 35-mile journey to Weymouth. On the return journey, the diesel locomotive will push the train from the rear, with the driver sitting in the control cab in the four-car trailer unit which now forms the front of the train. At Bournemouth, a 3,200 hp power unit will take over from the diesel and haul the train to Waterloo.

The new service needs 128 coaches, of which 96 will be conversions of existing locomotive-hauled stock. Some 39 existing steam-hauled coaches will also be converted to provide 'push-pull' trains on some morning and evening business services. A further 80 new vehicles, made up into 20 four-car corridor units, will provide intermediate and stopping services capable of 90 mph



£¼ million loss made by steam services will be eliminated within three years.

Electrification in the South

THE Southern Region has announced plans for the long-awaited extension of their 750 volt DC third-rail system to Southampton

main-line running. Boat trains will be formed of existing locomotive-hauled coaches, but diesel-hauled through-out to Weymouth and electro-diesel-hauled to Southampton docks.

It is estimated that 256 steam locomotives will be scrapped when the scheme is completed. With Western Region Warship Class diesels working all the Salisbury and West of England trains, this means the virtual elimination of steam from the Southern Region. Apart from the new multiple-unit stock, only 73 locomotives will be needed to work the SW Division of the Southern Region. Fifty of these will be Type 3, 1,550 hp diesel-electrics (20 are already operating in the area, and the remaining 30 will be transferred from Central and South Eastern Divisions) and the balance of 23 locomotives will be new electro-diesels. These will be made up of ten of the now-familiar 1,600/600 hp type, and the remaining 13 will be a new class — rated at 3,000 hp when operating as electric locomotives from the third-rail, and 600 hp when using their diesel generators.

The old pneumatic semaphores from Brookwood to Worting Junction will be replaced when colour light signals are installed from Hampton Court Junction to St Denys, just outside Southampton. Three new signal boxes will be built at Surbiton, Basingstoke and Eastleigh. New fast schedules, with timings such as 70 minutes to



Above: The new Festiniog Railway Brake Van No 1, built by the Midland Group of the Festiniog Railway Society. **Below:** One of BR's new Cartic 4 double-deck car carriers.

Southampton (a saving of 11 minutes on the present fastest steam schedule) and 1 hour 40 minutes to Bournemouth (a saving of 20 minutes), and increased frequency of service are expected to increase traffic.

Cartic 4

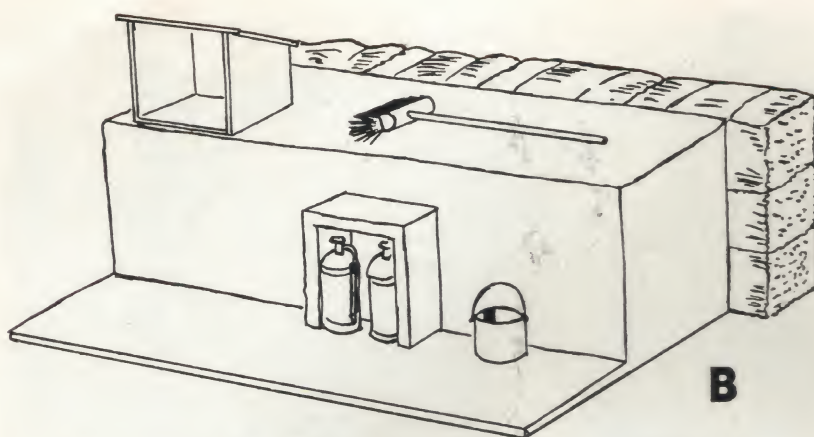
ILLUSTRATED this month is one of the new British Railways Cartic 4 double-deck car carriers. Each Cartic 4 is made up of sets of four articulated wagons, totalling 203 ft 5 in in overall length, and they can carry up to 34 cars. They are a great step forward in BR's attempts to win a large slice of the new-car distribu-

tion market. They will have twice the carrying capacity of conventional trains, while roller bearing axle-boxes and airbrakes will enable them to operate at speeds of up to 75 mph.

New Festiniog brake van

THE new brake van for the Festiniog Railway illustrated this month has been built by the combined efforts of the Midland Group of the Festiniog Railway Society. It replaces the old No. 1 van, which was nearing the end of its useful life and, with the exception of a few specialised items, has been entirely hand-built.





Wheelspin

BY BERT LAMKIN

Add 'atmosphere' to your slot layout

CARRYING on from my previous article, with the assumption that the circuit described has now materialised, there are a number of items that can be incorporated to create extra interest. Perhaps the first thing you see on full-size circuits are the advertisements; they are installed on hoardings or banners, and add quite a spot of colour to the track. So our miniature should also be given its quota. The thing to remember is that we are dealing with considerably less space, and so we must exercise some care in the type and siting of the adverts. It is worthwhile producing them rather on the small size — remembering that in 1:32 scale $\frac{3}{8}$ inch equals one foot. Poster hoardings could be measured in $\frac{1}{4}$ inches. Also, instead of reproducing one with a legend, let it be confined to one word — SHELL, ESSO, BP, etc.

If you are handy with a small brush, and decide to make your own, copy the style and colour of the original. As an alternative, motoring magazines will produce some that can be cut out, and of course the model

shops also sell packets of miniatures. Card rectangles, framed with 1/16 inch square balsa and mounted on $\frac{1}{4}$ inch square posts, will represent the full-size version quite well. With regard to their position—the prototype is aimed at the public enclosures. In our case that bare-looking area is an obvious place; one can also mask a corner from the 'competitor's' view—just to help him!

The position of the permanent buildings, such as grandstands, pits, etc., are automatically governed by the actual circuit. This condition obviously applies to the miniature—one does not put the pits bordering a fast curve. If there isn't a long enough straight, then a separate road is provided. Incidentally, remember that the ideal position for the paddock (where the competitors and cars assemble), is behind the pits. One or two home-built transporters and trailers with cars on them, placed in this enclosure, will give an air of authenticity.

Making fences

Enclosure fences can be made very easily from square balsa—1/16 inch for the horizontal rails and $\frac{1}{4}$ inch for the posts, with strips of card for the palings. Sketch (A) gives details of a typical fence. The posts are fixed in small holes drilled in the base-board. The close type of fence is

always used when adjacent to the actual track. If you position all the posts first, the fence can be constructed in small sections and glued into place—this will break up the monotony of cutting the card strips. An alternative fence can be constructed using matchsticks and fuse wire. In this case the matches are cut to length and the wire twisted round each one at about $\frac{1}{4}$ inch from each end, leaving a short length of wire at the end of each section to fix to the posts. With either type, keep the palings evenly spaced, otherwise your fence will have a very tatty appearance.

As mentioned previously, the flag points are an essential feature of full-size circuits. These can be built either as a simple protection or as an actual building, with raised floor and roof. I think for our small track their overall size should be kept down, and obviously we shall not install as many as on the prototype. Sketch (B) gives an example that is very simple to make. They are so positioned on the trackside that the flag marshals do not have far to move to be protected. It is not considered advisable to have the actual unit on the edge of the tarmac—anyway, marshals are usually pretty active characters!

Sponge bales

While still on the subject of protection, a fair use is made of straw bales—they are intended to give a cushioning effect between car and concrete. Any rigid structure that can be in the 'line of fire' usually has its quota of bales. I cut mine from scrap sponge rubber into blocks measuring $\frac{1}{4}$ inch x $\frac{1}{4}$ inch. You can get small pieces quite easily, and in the right colour for straw. If not, a spot of flat yellow and brown paints will produce the right effect. The flag points should have a double wall to them.

Another use of the bales is to indicate the track edge where there is no other distinguishing mark. On the miniature circuit this could very well be where you have increased its width—as you will have covered over the slots moulded in the plastic sides. When the real bales are used this way they are placed roughly four feet apart. Although intended to 'soften the blow', some of the 'press-on' marshals often use them as vaulting horses! Of course, short lengths of wood dowel painted like oil drums

can be used for markers. On the real ex-airfield circuits these seem to lose their shape very quickly!

All the structures being erected call for miniature people, although there isn't a very wide range in 1:32 scale at present. Those that are obtainable can be modified—arms can be cut off and repositioned, excess clothing can be erased with a sharp knife and the figure repainted. Always use matt colours; even the elbows on your own jacket haven't acquired a high gloss finish! A point to remember is that those miniature marshals should wear an armband. The marshal's flags, made from paper, are mounted on ordinary pins, each point having yellow and blue flags. If you want to be really accurate then have two figures facing in opposite directions; the one facing the oncoming cars carries the blue flag, and the other the yellow.

Rail for road

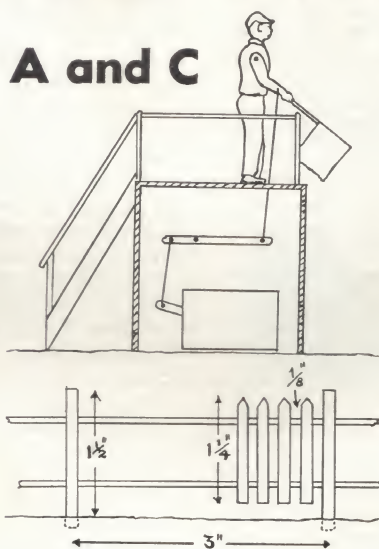
Really technical miniature circuit owners can take a tip from model railways, and install remote control of movable arms on the figures—this would, of course, include the starter on his small rostrum. (I personally think it is much better to start your races with the small figure suitably actuated, instead of someone shouting Go!) A model railway point motor fitted inside the rostrum can be made to move the starter's arm. With some thin wire linkage, a pivoted bar between figure and motor can provide any increase in movement needed. Anyway, sketch (C) gives the basic idea. The point motor can be energised by current from the track's power supply via a small push-button, such as a bell push. Photos in the motoring press of the racing scene will show you a number of small details that can be effectively incorporated into your circuit.

When you have completed the venue to your satisfaction the 'stable' or equipe can be considered. Nowadays, events are held for all types of cars. The Airfix range will give you Grand Prix, Grand Touring and saloon types, and the motorised kits are some of the quickest to assemble. In allocating racing numbers to your cars, I suggest you start with single-seaters, and allow a margin between each class for additional vehicles later. You could keep a record of each car's life. Often you will notice

that there is a marked difference in performance in cars from similar kits. This is where your 'tuning' skill comes in; check for complete freedom in moving parts, ensure that the pick-ups are making good contact and see that the tyres are symmetrical. The motor armature spindle should have a small spot of thin oil—the watch and clock variety, not the type used in the family car! You will be surprised how attention to these small points can improve performance.

Incidentally, as it is now December, your friends should not have any difficulty in getting the right Christmas present for you. The festive season should also increase the number of entrants wishing to show you just how to set up a record lap. If you find yourself with more drivers than cars, try a team event with two or three competitors to each car.

Make them change over after a certain number of laps. The change



over should be made with the car stationary at the pits. Any sharp practice in the team should lead to disqualification. A variation to having several drivers to one car would be three or four cars to a team, with each car having to complete a minimum number of laps. Changing cars would be done at the pits, preferably with a time interval between each change. Things would be rather hectic with all the cars being changed at the same time.

Another variation of the team race—this time when you have more cars than drivers—is to have two cars in

each slot. This naturally depends on the output from your power unit, but with any luck you should be driving two cars at once. Although speeds will be slower, it will keep you alert. You will possibly find it an advantage to have more than one controller available, as with the increased current they will tend to warm up quicker.

You will not lack variety if you follow the prototype programme. With miniatures the handling characteristics vary with the type of car. A points system can be introduced to produce the champion by the end of the Christmas holiday. One little point we may have overlooked is the chequered flag—this indicates the end of the race, as you well know. One of those model men could be placed on the start-line, suitably equipped. Alternatively, you could change the flag in the starter's hand—if you choose to adopt the idea shown in the sketch. One of the lady members could even present a small garland, perhaps using parts from Britain's garden series. You will find the trees from the same firm very good for scenic effects.

Look at life

When positioning trees, take a look at the real ones—certain specimens never grow side-by-side. Treat the base as though the tree is actually growing there—not just happening! If you are using the fold-up circuit described in the last issue, then the trees are best confined to the ledge that remains horizontal. To achieve perspective for this back scene the method is first the backcloth (landscape scene on paper), then cut-outs of buildings or hedgerows, then the three-dimensional trees, etc.

Miniature circuits, like model railways, are very much a question of personal taste. These notes are intended as a guide to the newcomer who no doubt will have his own ideas. I would stress, however, that the small track that has acquired its own atmosphere by attention to detail, based on full-size circuits, is always more interesting and rewarding than just a plain layout of trade pieces. As a matter of interest, Airfix track can be shortened or lengthened from its normal size very easily. A small hacksaw and polystyrene cement will achieve this, and the connecting tabs will slip under the conductor rail at the newly-made ends.

Military modelling

by C. O. ELLIS

Carrier conversions

PART 2—WARTIME ADAPTATIONS

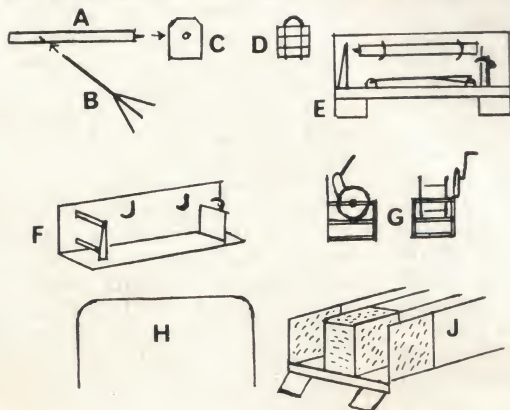
THE Universal Carrier was very quickly adapted to take the 3-inch mortars of support companies, one of several types of vehicle used for this role. Modifying the Airfix Carrier in this way provides much-needed support for Infantry companies and will, I hope, satisfy for the time being those many readers who have asked Airfix to produce a British mortar team.

Normal arrangement was to transport the broken-down mortar in brackets across the back of the vehicle, the weapon being usually assembled and fired from the ground, though it could, if necessary, be fired from the front compartment of the carrier.

Only the tow-bar and stowage-box are omitted from the model and the locating holes for these are plugged with scrap plastic. Two U-shaped brackets (from 33 swg or similar fine wire) are then cemented into small holes drilled above the original stowage-box locating holes. These brackets hold the mortar barrel, 33 swg wire being springy enough to secure it firmly.

Full-size drawings for the mortar parts and the various fittings are given; the mortar can either be cemented permanently in place or it can be made in parts to be assembled and deployed as required during war games. In the latter case tweezers will be necessary to handle these tiny parts,

Key to drawings: (A) Mortar barrel, drill hole where arrowed. (B) Tripod from pin and wire. (C) Baseplate. (D) Triple bomb carrier. (E) Arrangement of mortar on Carrier. (F) Positions of brackets on Carrier. (G) Side and rear of cable reel and frame on OP or Linelayer. (H) Profile of ambulance Carrier tilt. (J) Extensions on ambulance Carrier (shaded). All drawings full size, except F and J.



Left to right: A mortar crew leap from their carrier to assemble the mortar for firing. The weapon is seen on the back of the carrier; an 8th Army carrier ambulance moves forward with Shermans in Italy; an OP/Linelayer Carrier with its crew and equipment; a carrier, fitted for wading, moving through a Normandy village on D-Day. (All photos courtesy Imperial War Museum.)

but the effect as your carrier brings its mortar crew into action is well worth the trouble. A length of soft polythene (rather than polystyrene) rodding is best for the barrel as this is soft enough to ease the fiddling task of drilling a tiny hole to take the head of the tripod. The hole drilled in the mortar base-plate takes the pin in the end of the mortar barrel 'in action' and also fits over the small wire hook provided for its transportation on the carrier. The tripod is difficult to hold securely on the back of the carrier, but I solved the problem by drilling horizontally through the left-hand rib of the deck; the end of the tripod can then be inserted through this and rests quite snugly so long as the model is not thoughtlessly turned upside down.

A crew is easily made from Airfix figures. I cemented the driver in place, and kept the commander loose—cemented to a small styrene sheet stand. From the 'combat group' figures, a radio operator was relieved of his radio, and a kneeling rifleman of his rifle. After cementing a new right arm (from a 25 pdr gun commander) to the rifleman, I was then furnished with a commander, layer and loader. Final details are the triple bomb carriers for the mortar ammunition, each made from sprue 'stretched' over a flame.

A 3 inch Mortar Carrier of the Green Howards, based in Northern Ireland in 1941, was T8573, camouflaged in green and dark earth. It carried the serial number 60 in a red square on the right-hand rear dustguard and on the driving compartment front. A yellow disc with the number 5 was carried on the front right-hand dustguard, while the 5th Infantry Division sign of a white Y on a grey/brown disc was displayed front and rear on the left-hand dustguards. For a later period a suitable vehicle would be T166436, used by the Royal Warwicks in NW Europe in 1945. Serial Number was 61 on a red square, on right-hand hull front and rear dustguard, while the 3rd Inf Divn sign of three black triangles on a red disc was carried on the left-hand side. The code M3 was painted on the centre hull front in white.

CARRIER AMBULANCE

Another much-requested vehicle is an ambulance, for which the carrier can again be pressed into service. In fact, standard carriers were often used for casualty evacuation, in which role they simply displayed a red-cross flag, with stretchers being laid across the hull top. However, special Ambulance Carriers were also produced for front-line use



with Armoured Divisions, and these differed from standard machines by having the sides extended to the rear with an open back. This simple alteration is easily effected with styrene sheet, while at the same time a locker is added behind the engine casing, also extending to the rear. Stretchers are carried each side of the engine, but those given with Airfix soldiers are longer than true scale and need to be shortened to fit by cutting about 3 mm from the middle.

A canvas tilt protected the casualties and is modelled from tissue over wire supports. Another canvas cover could be rigged over the driving compartment in wet weather, but was more usually rolled back. Final details are folded stretchers (from wire and tissue) slung along the sides, a red-cross flag from tissue, and prominent red crosses on the sides, front and rear.

OP OR LINE LAYER

Its low silhouette suited the carrier for employment by field artillery regiments as an observation post vehicle or as a line layer to forward OPs. Only minor alterations are involved in the model, including an enlarged rear stowage box (12 mm wide by 6 mm high) which in the real vehicle carried extra batteries to power the radio equipment. The gun port is covered and the radios, made from scrap plastic, are fitted—one right forward and the other on the left-hand ledge in the front compartment. A tall radio mast is situated in a bracket on the right-hand side behind the driver, while a cable reel goes at the rear in a frame, as seen in the drawing. Petrol cans in a rack, and theodolite cases laid along the engine casing, are other typical details visible in the prototype picture.

For the 8th Army a typical vehicle would be T17163 of a field regiment in the 6th Australian Divn. This had the serial 42 on the red/blue artillery flash, and the formation sign of a white kangaroo above a boomerang painted front and rear on a black square. Colour was sand all over.

WADING CARRIER

In preparation for the Normandy landings it was necessary to improve on the carrier's low wading height of only 2ft 3ins. Carriers issued to the main assault divisions were therefore given heightened sides by the simple expedient of fitting on extra plates. With all low orifices plugged and the engine waterproofed, the wading height was brought up to about 5ft, so that the carriers could go ashore from landing craft with a much reduced risk of swamping. The driver had

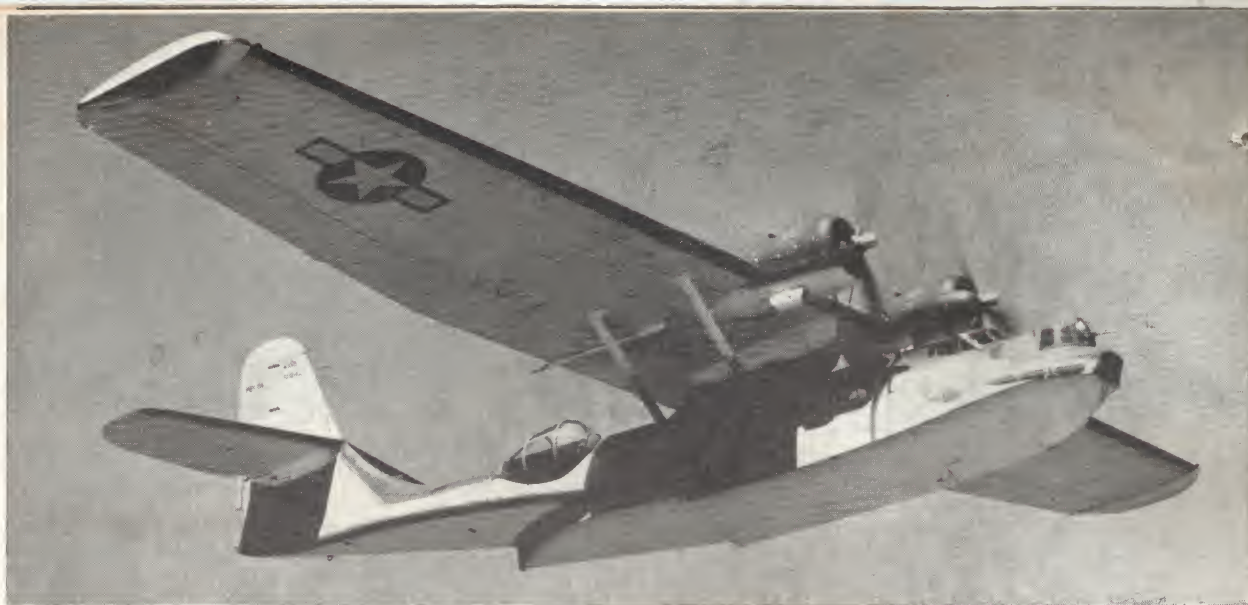
to be conned by the commander for this operation, but once ashore the front plates could be removed to give him a normal view ahead.

For the model you simply cement strips of 7 mm deep styrene sheet around the sides, allowing extra depth for the lower front compartment. A usual feature was a rack for jerricans and a camouflage net across the rear, above the normal stowage box. Mortar carriers of this type, needless to say, transported their weapons *inside* the superstructure.

These four essential conversions by no means exhaust the possibilities with the Airfix Universal Carrier, and others, including flamethrowers, will be covered in a later article.



Top to bottom: The Mortar Carrier model with its mortar assembled and crew ready for firing. Ambulance Carrier and the OP or Linelayer Carrier. (All these conversions have the Mk 1 type mudflaps, a template for which was given in the previous part of this article published in September.) Wading Carrier in D-Day markings, and the Mortar Carrier again, this time showing the mortar stowed on the back and the crew riding in the vehicle.



This PBV-6A, 46642, has a dark blue/light grey finish. Note the tall fin and rudder.

WHEN the Consolidated Model 28 appeared, its makers surely never imagined that, 30 years later, a few remnants from wartime production would still be fulfilling their primary rôle, albeit doctored to fit the atomic age. Amphibians have always clung to life throughout evolution, and the Catalina, PBV, Canso—call it what you will—is proving the rule aeronautically.

Consolidated began designing flying boats for the US Navy in the 1920s, their work culminating in the XPBV-1, first flown in the spring of 1935. In many ways this resembled the design we may conveniently call the Catalina, although between this and the well-known PBV-5 lay the PBV-1, 2 and 3 of which the Navy accepted 176 examples from 1936 onwards. It was in the summer of 1939 that the PBV-5 entered naval service.

The PBV-5 was an unusual-looking aeroplane, reflecting in an unconventional way the need to place the engines well above the water and ensure good hydrodynamic characteristics, for its mainplane—supported by four hefty struts—was mounted on a pedestal. In flight it curiously appeared as if the Catalina could rotate using its pedestal as an axis. The PBV-5 series were powered by Pratt and Whitney Twin Wasp R-1830-92 engines, and cruised at about 130 mph at 10,000 feet, although on operations they usually flew much lower. Their absolute range with 1,570 US gallons was 3,100 miles, although this optimum figure was constantly adjusted by the wide assortment of loads which were carried. Duration was often of more importance than range, for seek and follow was often the order of the day, not to mention monotonous but vital convoy patrols which the PBVs performed all over the world. Sorties approaching a day long were far from uncommon, to places as far apart as Murmansk, the

Seychelles and the Caribbean. In short, wherever there was sea water, there the PBV was to be found employed in the air war's least glamorous rôle.

Production of the Model 28 and derivatives totalled 1,196, in addition to which there were 944 amphibians. The PBV-5 and 5B were the standard versions of the early war years, but to permit the parent firm to produce other more urgently required designs, Catalinas were built by Boeing in Canada as the PB2B-1. The PBV-5A was an amphibian version, supplied to the US Air Force as the OA-10-CO, to the extent

of 56 aircraft based on the PBV-5A and intended for ASR work; the OA-10A-VI, of which 230 were built by Vickers Canada in addition to those supplied to the RCAF and to Britain as the Catalina III/IIIA; and 75 OA-10B-CN, which were amphibious versions of the later PBV-6, and similar to the PBV-6A.

Extra weight of the undercarriage gear reduced the performance of the Catalina, the PBV-5A cruising at 125 mph at 10,000 feet, and having a range of 2,520 miles. Although its war service was comparatively limited, it has found employment since in the air forces of Argentina, Brazil, Chile, Denmark, Mexico, Ecuador, Indonesia, Israel, the Netherlands,

Norway, Peru, Russia and, of course, the United States. A Dutch machine frequently seen in Britain a few years ago was all silver with the national 'roundel' placed aft of gun blisters and above the wings tips. The Dutch tricolour appeared as a small horizontal fin flash. The only other markings were '16:219' in black, with the 16 forward on the port side and aft on the starboard side of the fuselage insignia. Danish amphibians have operated in the cold north, and two of them at least, with 853 or 855 in black at the base of the fin, were finished in light grey but for their

PROFILE

The Catalina: flying boat of three decades

bright orange upper wing surfaces. The Danish roundel was painted on a square grey background. Roundels were also painted on the bows, and a large Danish flag with a cutaway rear section was painted across the fin and rudder.

It was with the Royal Air Force that the Catalina first engaged in action. Britain had purchased a Model 28-5 in 1938, which was flown across the Atlantic to Felixstowe in July, 1939. After trials at the Establishment, the silver aircraft was handed over to No 228 Squadron for further testing, and was used by other squadrons. Favourable comment led to an initial order for the type, named Catalina 1, awarded the serials W8405-8434.

Before these began to arrive in the spring of 1941, AM258, alias 'Guba,' reached Britain, and soon after became G-AGBJ. She had carried an erroneous serial and when later returned to the RAF, she was re-registered SM706. Seven more—designated Mk II—followed, and were essentially similar to the Mk 1s. These, AM264-270, arrived early in 1941. They were soon followed by a batch of Mk 1s, AH530-569, delivered in the summer of 1941. After these came deliveries from the Z2134-2153 group, and from the batch AJ154-162. The Catalinas were quickly introduced into Coastal Command, where their first spectacular success came on May 26, 1941, when WQ:Z of 209 Sqn spotted the *Bismarck* after the Royal Navy had lost her. Another machine, this time of 240 Sqn, subsequently shadowed her. By the middle of 1941, three home-based squadrons on 15 Group had Catalinas, Nos 209 and 240 at Lough Erne, and 210 based at Oban. A few were now in service at Gibraltar with 202 Squadron.

The year 1942 saw the arrival of Mk IIAs, VA701/736, which had been 9701-9736 of the RCAF and were built by Canadian Vickers. They were supplied with the VA serials in respect of this, a most unusual practice. The beginning of Lend-Lease brought along the Catalina 1B, thus designated to show its origin on US Navy contract, 225 aircraft—FP100-324—being involved. They also carried the designation PBY-5 and two, FP221 and 224, were used by BOAC on their Indian services. Only 12 PBY-5A Catalina III/IIIs, amphibians known elsewhere as Canso, were set aside for Britain, but they were not used by Coastal Command. Instead, they operated on the North Atlantic Ferry Service between Canada and Prestwick. Equipment changes brought along the Catalina IVAs, serials JX200-269, JX570-585 and JV925-935. The IVB was the British version of the PB2B-1, of which 193 were earmarked for delivery, and three went to BOAC. Some IVBs had a large egg-shaped radome above the rear of the pilot's cockpit, but this was not generally fitted. When it was, the front was usually black and the remainder red. IVAs were delivered during the summer of 1943, and were followed by the IVBs sent mainly to the Indian Ocean area and Far East. These were not the first RAF Catalinas to serve there; some of the 205 Sqn Mk 1s faced the Japanese in 1941.

No Catalina V appeared, but a few Mk VIs came to Britain—although none saw squadron service. These, like JX632, were PB2B-2s built in Canada. They resembled the PBY-6, itself derived from the PBN-1 built in the USA by the Naval Aircraft Factory. Its most obvious new feature was a tall fin and rudder, although it had many more refinements. These included a two foot longer pointed bow, a step amidships with 20 degree taper, a rear step placed five feet further aft, a shallow breaker step added just forward of the tail, much stronger wings, modified wing-tip floats to improve lift and planing characteristics, extra fire power

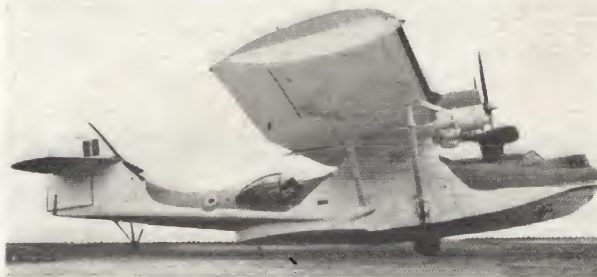
in a nose turret (of refined design fitted to some earlier aircraft, too), and two extra fuel tanks in the wing centre section giving up to a one-third increase in range. NAF built this version instead of the manufacturers, because it was considered that to change to the later design would delay production. The PBY-6A was an amphibious version of the new variant.

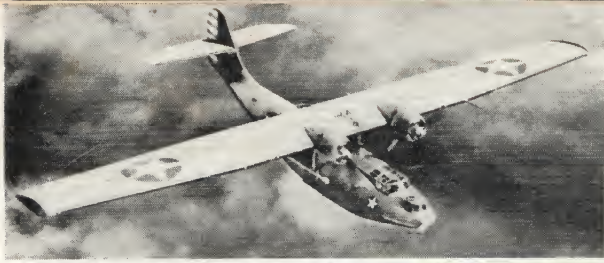
PBN-1s for the US Navy followed the then current colour scheme of either white overall, midnight blue overall or deep sea blue with light grey undersurfaces and lower hull. These latter colours are carried by the PBY-6A illustrated. Earlier schemes are also depicted where the basic colour was silver and, later, a blue and grey finish. Such individual markings as were carried were white or black. An interim scheme used, at least on some amphibians, utilised a slightly lighter shade of blue along the hull sides.

Catalinas delivered to the RAF in 1941 had green and brown upper surfaces, and sky under surfaces. In American style they carried roundels on the bow, but these were repainted aft following arrival in Britain. A second refinement came when dark grey replaced the brown on the upper

Continued on next page

Top to bottom: AM 269, an early Mk 1 of No 240 Sqn. BN appears forward in red, K aft in light grey. W8405, a Mk 1 of 209 Sqn, photographed early in 1941. A typical Mk IVB, JX286, has the large radome over the cockpit, and ASV aerials on her wing leading edges. She appears similar in many ways to the IVB JX224 mentioned in the text. AXL Z2147 off Gibraltar in 1941. She has grey codes.





Top: A PBV-5A with red rudder striping and early US Navy wartime camouflage. She retains the red centre to the stars. **Above:** A standard PBV-5 of the US Navy, complete with ASV arials on its wing leading edges, and grey/blue paintwork.

PROFILE—Continued

surfaces. Likewise, the dull red codes at first specified were soon over-painted grey. The greatest change came in 1942, when the undersurfaces, hull sides and vertical tail surfaces were painted matt white and codes applied in red and black, months before the change to narrow-band roundels.

The first three RAF squadrons to use the Catalinas were equipped at the same time, early in 1941, and with the new equipment could make patrols of up to 1,000 miles out over the Atlantic. No 209 Sqn moved to Iceland in August, and from there helped to sink the U452 before returning to Pembroke Dock in October. Meanwhile No 202 Sqn was engaged in patrols from Gibraltar, where it was joined by a detachment from No 413 Sqn, which formed at Stranraer on July 1, 1941. The nucleus of No 333 Sqn began training at Sullom Voe in November, 1941, and formed as a detachment of 210 Sqn at Woodhaven in February, 1942.

During 1942, No 210 Squadron escorted convoys to Russia and later to North Africa. On September 23, FP115: DA-U

of 210 Sqn sank the U253, two months after 330 Sqn had begun operating with Catalina IIs from Iceland. A second Canadian squadron, No 422, formed at Lough Erne on April 2, and soon after No 413 moved to the Far East. No 209 flew East, to cover the Indian Ocean from Mombasa. Other Catalina squadrons formed in 1942 were 119 at Lough Erne, 212 using Mk 1Bs and 270 at Jui for operations off the West African Coast. No 240 Sqn flew to Red Hills, Lake Madras, in June, 1942, sinking the Italian submarine *Veniero* en route. From its new base it patrolled the Bay of Bengal, using Addu Atoll as an advanced base. Absence of enemy shipping caused its transfer to weather recce until, in 1943, a new rôle was found, supporting land forces by landing in enemy territory. A special duty flight of three Catalinas was maintained, sometimes to parachute men and supplies. Eighty-five such sorties were flown, and after VJ-Day the squadron began transporting for civil administration purposes.

At Sullom Voe No 190 Sqn was formed on March 1, 1943, to carry out patrols over the Arctic. Another new squadron was No 191 formed at Korangi Creek using IVBs for Indian Ocean patrols. Other squadrons which operated the Mk IVs included No 210 Sqn (eg, JX249), No 202 Sqn at Castle Archdale (eg, JX225 with TJ aft and M ahead of the blister in grey. ASV wing arials and a Leigh Light beneath the starboard wing), 333 Sqn, 259 Sqn at Kipevu and later Dar-es-Salaam, 262 at Koggala, 265 at Diego-Suarez, and 321—a Dutch squadron whose Do 24s were replaced by Mk IVBs, including JX365.

British Catalina squadrons carried squadron codes in full in 1941-42, as on AH544: A X H and AJ159: A X B, whose grey codes were placed with the unit letters between and aft of the wing struts and the individual behind the roundel. These aircraft had the green-brown-sky finish, as did AH530: W Q T and VA703: W Q M of 209 Sqn, whose letters were placed as on D A L: AH550 of 210 Sqn, which had them spaced before, between and aft of the mainplane struts. None carried ASV arials, and all were used before the white paint scheme came into force.

After the change to the new colouring, squadron letters largely seem to have disappeared, leaving only a black and sometimes red letter aft of the roundel, as on FP212: F (black) in use in mid-1943. With her I recorded Z2152: M wearing the same colours, etc, and used by 131 OTU. FP204: X of 209 Sqn and FP246: A of 212 Sqn were similarly marked, and had ASV arials like the other Mk 1B, but these wore standard SEAC roundels, etc. A home-based Mk IV with ASV, etc, was JX225: L of 202 Sqn.

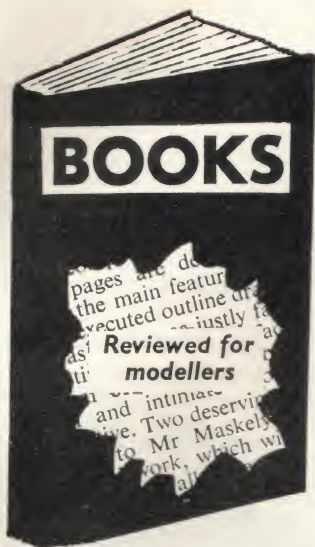
One of the most interesting Catalinas I ever saw was JX224, which ignominiously forced herself into a field not

Continued on page 119

An early PBV-5, wearing the silver finish with yellow panel for easy identification.



NEW BOOKS



The Lancaster in detail

LANCASTER—THE STORY OF A FAMOUS BOMBER, by Bruce Robertson. Published by Harleyford Publications Ltd, Letchworth, Herts. Price 60s.

AN aircraft long overdue for a book devoted to its development, service and variants is undoubtedly the Lancaster. Bruce Robertson—who now has the reputation of being able to produce the best in historical surveys of this nature, plus the many hundreds of unusual photographs and illustrations that go with it—has produced a book which is well up to his best. Not only has the Lancaster been dealt with in absolute detail, but the beginnings of the story in the Manchester and the end in such aircraft as the Lincoln, York and Shackleton have been covered as well.

All works of this nature are of tremendous use to the model maker, and Harleyfords always seem to come up with some very good three-view tone drawings which are useful for camouflage details. In this case they are in 1:144 scale and cover all the major types and variants associated with the development of the Lancaster.

Perhaps the most outstanding achievement is a list of serial numbers of every Lancaster produced, plus the eventual fate of each. This is an outstanding example of research on the part of the author and, although many people will try to pick out mistakes, we can be assured that every effort has gone into making the list as accurate as possible. With 7,000 aircraft to deal with this section of the book must be regarded as a herculean effort to record the history of such an important aircraft.

Story of Ireland

THE SCHULL AND SKIBBEREEN TRAMWAY AND LIGHT RAILWAY, by A. T. Newham. Published by The Oakwood Press, Tandridge Lane, Lingfield, Surrey. Price 8s 6d.

THE Schull and Skibberreen is one of the latter-day well-known Irish 3 foot gauge railways that were built under Baronial Guarantees in the late 19th century, and struggled on until road competition eventually forced their closure. The S & S lasted until after the second world war, when succeeding fuel crises added further difficulties to its continued existence. The last passenger train finally ran early in 1947.

Many local anecdotes liven the otherwise familiar story,

and the author has compiled an interesting collection of photographs to illustrate his work. A map, station layout plans and gradient profile also amplify the information contained in the text. As number 24 in the Oakwood Press Locomotion Papers Series, this is a well produced and welcome addition.

Easy aircraft reference

MACDONALD AIRCRAFT HANDBOOK, by William Green. Published by Macdonald and Co Ltd, 2 Portman Street, London W1. Price 30s.

IT'S surprising how often one needs an aircraft silhouette for checking details when making models. When they are as accurate and up-to-date as those drawn in the *Macdonald Aircraft Handbook* by Dennis Punnett, then the job is much easier.

As an easy reference to almost 600 aircraft in use throughout the world, this book has very few challengers. In addition, each silhouette has a description of the aircraft and a comprehensive technical information section. Unlike those in some magazines of late, all the silhouettes are solid black and remind the old hand at the recognition game of the silhouettes on which he 'cut his teeth' during the war. We prefer these to the outline drawings which have appeared recently in the aeronautical press, and the book will be popular from this aspect alone.

Aircraft are grouped under broad structural categories, such as biplanes, light civil transports, shipboard aircraft and so on. One of these sections deals with research aircraft, and has silhouettes and details of such interesting types as the BAC 221, North American X-15 and VJ-101C. Not only has William Green collected together a comprehensive selection of aircraft types, but he has also attempted to show some that are pioneers in the advance of aeronautical knowledge. This book is one which will be welcomed by model makers and spotters alike.

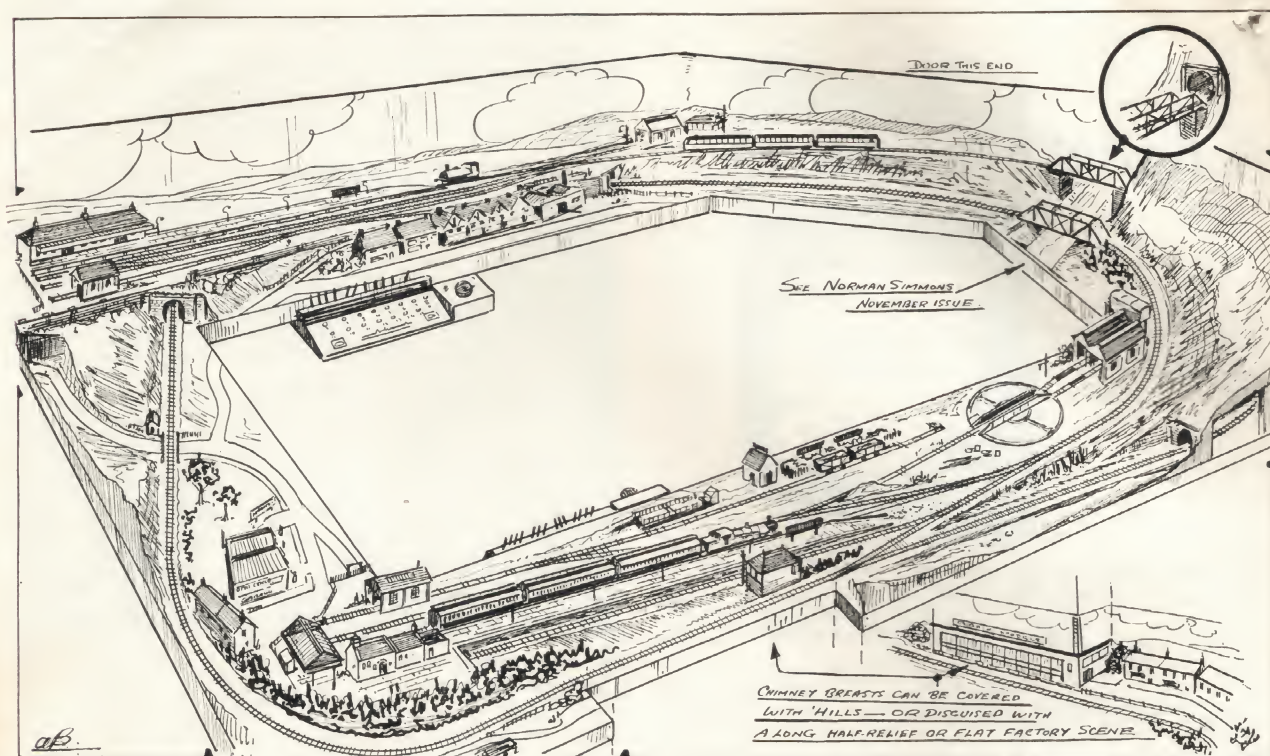
NEWS FROM IPMS

THE London Branch of the International Plastic Modellers' Society held a successful and well-attended meeting at the Porcupine on Friday, October 30. Main event of the evening was a 'brains trust' session, where the Chief Designers of the three major manufacturers (Airfix, Frog and Revell—all associate members of IPMS) answered questions from members. This was very useful to all concerned as members heard, many of them for the first time, the full story of the design and manufacture of a model in kit form and all the problems involved. The designers too, of course, also heard some of the likes and dislikes of modellers!

In other parts of the country things are beginning to move. The north-east area held a meeting in Hull on Saturday, October 31, but this was, unfortunately, very poorly attended. A new branch has been formed in the Liverpool area, and details of meetings will be published as soon as possible.

Membership generally continues to grow, many new members specialising in military modelling. The standard of the News-sheet also improves, inasmuch as the Society now has an excellent system for reproducing line drawings by a photographic method. Issue number ten was devoted entirely to German topics and contained, among other things, the correct paint mixes for all the main colour shades used on Luftwaffe aircraft during World War 2. As a new venture, IPMS has also issued a quarterly magazine, which has been produced jointly by the UK and US branches and circulated to members.

R.R.W.



The layout allows the room to dictate its shape. The result, strangely enough, can be more railwaylike.

LAYOUT REALISM

—by Alex Bowie

A clear case of comparison

THERE is no doubt that a small section of the hobby works itself into a state of enthusiastic pessimism about any sort of change. The alleged toy train recession is a wonderful opportunity, even though it has little to do with railway modelling. A lot is talked about losing recruits for the hobby. I think that a seven-year-old who is a Jim Clark at breakfast, an engine driver by lunch, and space-bound before bedtime is hardly likely to be a reliable prospect for any hobby. A cheap train set is more likely suitable for small youngsters and Dad's pocket, and one big chain store was selling them in large numbers for the first time last Christmas.

Although it has overflowed into other markets, the proprietary set was originally aimed at the more mature school-boy groups, and there is no sign that they are losing interest. These are the recruits. Schoolboys thrive best in a con-

structive and optimistic atmosphere. Let's take the hint and concern ourselves with the happy state of modelling, rather than the real or imagined state of a trade which has, as one authority put it, 'only a tenuous connection with the model railway hobby.' I agree, and being a *sort* of artist, I would not regard any falling sales of 'painting by numbers' as a blow to the art world.

Horrible old 1964 will soon become part of the good old days, and I look forward to 1965. My personal wishes for this year are that we hear less about the drawbacks of these things such as 'Beechingisation,' which cannot be altered, and more about the almost incredible advances in prototype and hobby.

TOKIO TON-UP

The Japanese, for instance, are now doing ton-up journeys over 300 miles long. The major modelling and model railway exhibitions are looking forwards, and not backwards, though the Hobby Show is perhaps the one exception and definitely needs to modernise its showmanship. I hope, too, that it will be held during the proved exhibition season: mid-summer is a notoriously bad time.

All in all, there is a lot to praise, and I vote we do so just for the novelty of it. I will praise the trade, though being passably human, I am more interested in its products than in its inner workings. And jolly good products, most of them are.

I will bring one of the latest products to your notice, namely the new Gem plastic sleepered track. This track illustrates the difference between the modellers' and the toy users' outlooks, because it is designed to appeal to the perceptive faculties of the user. And as a further step towards modelling realism, the webbing is sunk below the top of

the sleepers, so that when ballasted it is unseen. The rails are raised above the sleepers as on the prototype, further adding to the scale effect. These two simple provisions would be unnoticed by the toy user, and it is this mental attitude to things which most distinguishes the model hobby from the toy market.

The turnouts, incidentally, have metal frogs, making for more consistent running and, as far as plastic sleepereed flexible track is concerned, this is a worthwhile advance.

However, this Gem track is just one item among a host of advanced modelling requisites, and kits are another. These are so obviously models that nobody confuses them with toys.

ARE OVALS NON-U?

Many modellers, quite naturally, will almost bend over backwards to get away from this unreal toy effect. U- or L-shaped layouts, and straight ones, are popular because of this—and jolly nice they are, too. But the fact is that when a chap is lucky enough to have a whole room, he can't be blamed for making full use of it and will choose an oval. Thus, though his circuit will look bigger than a toy one, it can still look very much like it. Almost by instinct, the layout builder follows the same geometry, and ends up with a formalised shape looking like an oversized table top layout.

This month I have sketched an 'oval,' and have shown it in the confines of an average box-room. You will note that the track does not follow the toy course, but meanders a little. The curves, which are necessary evils, follow one of my favourite themes, are hidden where necessarily sharp, and follow a very large radius where it is practical.

To see the layout as sketched, you are hanging from the chandelier. Thus you will see all of it, including the curves which are hidden when you are normally seated at the controls. I have sketched it to fit a small bedroom or box-room. In most houses, this would be over the hall, and have a shallow single-width chimney breast, plus a small door opening inwards and hinged as shown in Fig 1. Far

Fig 1: The track plan, which is capable of alteration because space is left for it. Double track line is possible, for instance. **Fig 2:** Illustrating two or three pointers to gradient building, see text. **Fig 3:** A transition can be useful—even if hidden. In fact, hidden track should leave nothing to chance, also see text.

from being a nuisance, the door forces me to make a wide sweeping curve, well away from the walls.

You will need one gradient, so look at Fig 2, which gives a few pointers. Observe that I have also diagrammed this gradient. The section A, whether it has straight or very gentle curving track, can be tolerably steep. But B, which curves sharply, will exert a lot of drag and friction on the trains. So it should have a gentle gradient to cut down the friction and make climbing easier.

When a track changes gradient it should not do it abruptly, as in C or E, but gently as in D and F. And it will help if the track is allowed to 'float' a little at this spot,

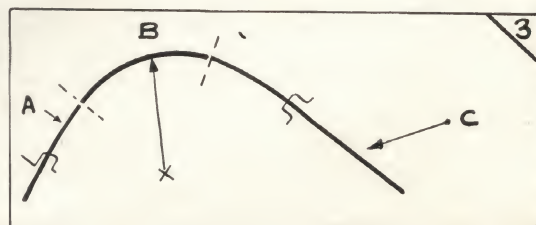
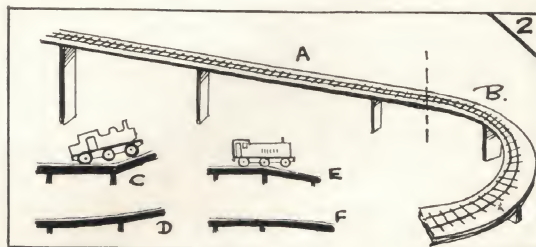
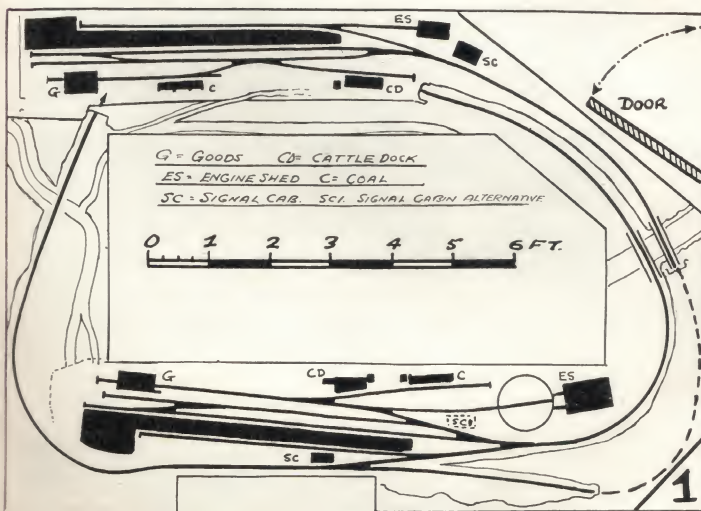
Pass on to Fig 3, which shows the hidden curve under the high level station. This is underneath a high level, and furthermore is at the apex of two fast sections. So it would be advisable to allow for 'transition' curves to lessen the chances of derailment. The trains should be allowed to ease in and out of the sharp curve B, through gentle transition curves A and C.

You will appreciate that I can't go into enormous detail, but I have tried to illustrate that modelling properly carried out is a little more scientific than playing with toys.

PROFILE—Continued

far from Oakington airfield, near Cambridge, in August, 1954. A model maker's joy, she had the white finish with her camouflage sweeping down the hull, forward of the pedestal, and aft up to the tail unit. The curious thing about her was her camouflage, which conformed to the usual washed-out grey and green employed, but included three large areas of dark grey! Her code letters were grey, the usual colour for 1945, and she had KK ahead of the blister and B aft of the roundel on both sides of the fuselage. Between her struts was painted a Norwegian flag with a cut-out, and it measured 42 inches by 24. Above the wing were red-white-blue roundels and on her nose 'VINGTOR IV' in black. The black radome above the cockpit had two red bands around it. ASV aerials sprouted from the wing leading edges; and the exhaust pipes were of the short variety. It was on the evening of August 19 that I viewed her, and apparently she had been on her way to doom anyway, hastened now because she had broken her main spar. The sight of a Catalina in a field near home was to be a lasting memory which I still cherish.

M. J. F. Bowyer



New kits and models



BUILDING KITS

PLAYCRAFT have sent us a selection from their new and extensive range of over 40 building construction kits. They are ideal for all OO/HO gauge model road and rail layouts and are well designed and made. Prices are attractive, ranging from 2s 11d to 15s 11d. All the plastic parts are accurately and realistically self-coloured, and no additional expense is required for paints and brushes. The kits are manufactured in West Germany, but the stations are, in fact, based on the latest BR designs.

The Playcraft range includes a wide selection of small residential houses and shops, as well as many industrial and railway buildings. There are also many small accessories, such as footbridges, station kiosks, seats, tunnel mouths, stone walls and fir trees, etc. These small items are available ready assembled in packets at 1s 6d and 1s 11d. *N.S.*

IN THE GROOVE

NOW making its way into the shops ready for Christmas is Playcraft Toys' Champion electric slot-racing system. Working on the conventional 12 volt dc supply, it has been designed to be developed from the basic set into a fully comprehensive circuit layout, while keeping costs down as much as possible. The smallest basic set, Set A, provides a two-lane oval track, 36 in by 15 in, Jaguar and Mercedes sports cars, crash barriers and two cross-over sections. This set costs 99s 11d. Sets B and C include Ferrari and BRM racing cars and 12½ ft and 16 ft of track, respectively. A combination of the two sets forms a compact four-lane set-up in an area of less than 6 ft by 3 ft. Set B costs 119s 6d, and C 130s. The cars look authentic and are well engineered. *D.C.N.*

PRE-WAR RACER

FROM Auto-Kits comes news of their latest all-metal racing car kit, the Bugatti 35B. Fully detailed louvred bonnet, suspension and radiator capture the atmosphere of this pre-war Grand Prix racer. Selling for 59s 6d, it is available from Auto-Models Ltd. *D.C.N.*

MORE MODEL TANKS

THE trend among military miniatures to smaller and smaller scales seems to be following exactly in the path of model railways. Denzil Skinner has been producing cast model tanks in 1:96 scale for some time and these were reviewed in our April issue. The latest range available in

Britain, made by Roskopf, is in a similar small scale, generally to 1:100, though in a few cases, mainly lorries and trailers, a larger scale is adopted.

Made in West Germany, Roskopf models are moulded in polystyrene with a fair amount of detail for their diminutive size. Some will quibble at one or two inaccuracies in such details as turret shape in a few of the models, but in such a small scale these are hardly noticeable.

About three dozen models are available, mostly of post-war fighting vehicles like the Patton, Centurion, the HS30 APC (Federal German Army), the M52 SP 105 mm (USA) and the BTR 50 Troop Carrier (USSR). World War 2 types include the inevitable Panther, Tiger and T34. Tracks and suspension in each case are moulded in one piece, but small wheels beneath the hull enable the models to be pushed along. Moving parts include turrets, guns, recoil spades on



Right, top to bottom: Selection from Roskopf range, including (left to right) an M52, BTR 50, M47 Patton and DKW Munga. The 1:100 scale Roskopf Panther (left) is considerably smaller than the 1:76 scale Airfix model. Two new Playcraft releases—three of their German-made building kits and the Champion slot-racing system.



SP guns and crane jibs on recovery vehicles. Prices vary, but most cost 2s 6d each.

A minor criticism is that the description 'HO scale' is given on the cartons. This could be misleading for someone hoping to add to a collection of Airfix-size models, since all the Roskopf tanks are dwarfed by their Airfix counterparts. However, as a collection by themselves or with Denzil Skinner's models, the Roskopf range is a commendable newcomer for military modelling enthusiasts in Britain.

Our review samples were kindly supplied by BMW Models, of Wimbledon, from whom the models can now be obtained. *C.O.E.*

FOR THE EXPERTS

THE model engineers among our readers, the avid scratch builders or the convert-it-beyond-all-recognition enthusiasts will be interested to hear of a new range of compact and economically priced precision machine tools. These are the Flexispeed Star Machines. There are six planned in the range at the moment, though not all are yet available, ranging from the Meteor I Student Lathe at £17 (a particularly useful item), to the Jupiter 3 Centre Lathe at between £40 and £45. A wide range of attachments is also listed. For full details, specifications and illustrations of these machines, contact Flexispeed Ltd, Mackay Works, Central Way, Feltham, Middx. *D.C.N.*

EASY RECOGNITION

RECENTLY issued by Model Racing Developments are self-adhesive colour recognition labels (one per car, team or lane) and lining tape for slot racing cars. The triangular labels are available in a range of colours, stick securely to almost anything and cost 1s 6d for a packet of 96. The coloured tape sells in a range of widths and lengths at 1s 6d for 36 in up to 1/16 in wide, and 18 in up to 1/4 in wide. These slot racing accessories are obtainable from BMW Models, Wimbledon. *D.C.N.*

'GROSSER MERCEDES'

LATEST Dinky Toys die-casts are a fine 1:42 scale Mercedes 600 and a seasonal variation on their Model T Ford theme. The miniature 'Grosser Mercedes', a replica of Daimler-Benz's most luxurious limousine, features opening doors, bonnet and boot lid; full interior trim; steering; four-wheel suspension; plated 'dummy' engine; luggage; chauffeur, and two passengers. Finished in wine red with blue trim, and sporting Dinky's new 'Dunlop' tyres, this 5 1/2 in long Merc costs 14s 11d.

The Model T Ford is brightly finished in white, red and yellow, and carries a miniature Father Christmas, his sack of gifts and 'brass' trimmings. Price is 9s 11d. *D.C.N.*

PAINTS AND PLASTICS

THE popular Humbrol range of dopes has recently been considerably improved and simplified. Now it simply consists of clear dope and eight shades of spray and brushing coloured dope. Both resist the hottest fuels and are priced from 4s 6d for spray and 1s 9d for brushing.

Other news from Humbrol is that they are now distributing the Paramount series of plastic historical coach kits. There are seven in the range at the moment, priced from 7s 11d. We had the State Coach kit submitted for review and found it an excellently detailed replica of a difficult subject and well worth the money. *D.C.N.*

December, 1964



Top to bottom: Auto-Kits Bugatti 35B; Matchbox Lincoln Continental and Snow-Trac; and Dinky Toys Mercedes 600.

'FOREIGN' MODELS

TWO new additions to the Matchbox range are miniatures of the Lincoln Continental luxury sedan and the Swedish Snow-Trac utility vehicle. Finished in blue with nickel-plated grille and bumpers, the Lincoln has full interior trim, windows, suspension and an opening boot lid. Costing 1s 11d, the model is 2 1/4 in long. The Snow-Trac, finished in red with authentic 'Snow-Trac' transfers, has working rubber tracks, a towing hook and tinted windows. Measuring 2 3/8 in long, it sells for 1s 11d. *D.C.N.*

MINIATURE WAGONS

WE reviewed the Egger-Bahn narrow gauge system in our January issue. BMW Models of Wimbledon, who stock this fascinating German-made equipment, have submitted samples of two more new wagons. They feature the same chassis as the earlier ones, but the new models have bodies representing a flat wagon with ends and an open truck with sides and ends. Despite their size—just one inch long excluding automatic couplings—they are made to

Continued on next page

New kits and models—Continued

absolute precision, and will roll on their insulated two-rail metal wheels by a puff of wind. They cost 8s 11d each. *N.S.*

EASY LETTERING

LETTERING small scale models has always been a bit of a bugbear to the not-so-steady-handed painter. Letraset has made the job easier, though at 7s 6d per sheet it is too expensive for many modellers. Blick Dry Print is an identical product, supplied in smaller sheets. Several sizes and styles of type are available, these new handy-size sheets costing a more economical 2s 3d each. *D.C.N.*

COLOUR LIGHT SIGNALS

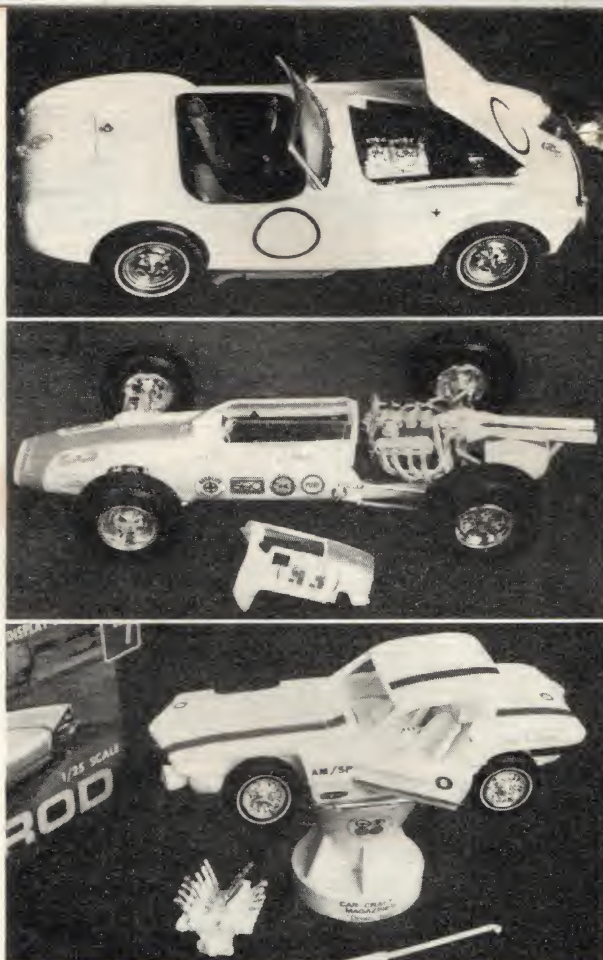
WE have received from Lone Star samples of their new Treble-O-Lectric colour light signals. They are no more than 1½ inches high and stand on a base ½ inch square. They are simple but effective metal castings, finished in light grey paint and fitted with green and red jewelled reflectors. Holes drilled in the base facilitate fixing. They are priced at 2s 6d per packet of three. *N.S.*

MORE 1:25 SCALE CARS

THREE new AMT 1:25 scale car kits this month are the Indianapolis Lotus, a hand-built custom model, the Car Craft Dream Rod, and a Shelby American Cobra. All three samples were supplied by BMW Models of Wimbledon. The Lotus kit costs 20s and makes up into an attractive model. It has many good features, but particular mention must be made of the Ford V-8 engine. Two versions are possible and the complex chrome exhaust system of the 1963 Indy engine with Weber carbs is extremely well done. The majority of the suspension parts, together with wheel centres and disc brakes, are chrome plated, and the tyres are well moulded in black rubber. Most of the body parts clip in place and need not be cemented, which enables the detailed chassis and interior details to be displayed.

Notwithstanding its shock appearance, the Car Craft Dream Rod kit is up to AMT's usual high standard. Welcome features are the opening doors—which work extremely well—and the steerable wheels. Enough parts are included

New Egger-Bahn trucks (from BMW Models) and Treble-O-Lectric colour light signals.



Three more 1:25 scale AMT kits—AC Cobra, Indianapolis Lotus-Ford and Car Craft Dream Rod (all from BMW Models).

for two engines—the stock 289 CI Ford Fairlane or the Ford overhead camshaft Indianapolis engine (this latter can be used to convert the AMT Lotus-Ford to the 1964 version).

A particularly interesting feature of the Dream Rod kit is the revolving display pedestal. It is so ingeniously designed that a single rubber band will keep it spinning round very slowly—something like one revolution per 75 seconds—for as much as three hours! Good value at 27s. 6d.

The third AMT kit submitted by BMW for review is a magnificent 1:25 scale replica of a Shelby American Cobra. Basically a British AC Ace—with an American 4.7 litre V8 Ford engine, a lot has been seen and heard of the Cobras during the past racing season, and here is a model with real topical interest. Moulded in white plastic, with 'chromium' wheels and mechanical parts and rubber tyres, the AMT Cobra may be built in any of three ways, stock, custom or racing. Substitute grilles, bumpers and wheels are provided, as well as a roll-over cage and sleek custom hardtop. With too many excellent features to list fully in our overloaded space this month, the Cobra is more than worth its 20s. *N.S./D.C.N.*

READER REMINDER

READERS writing to model manufacturers or retailers as a result of reviews or advertisements in AIRFIX MAGAZINE are reminded to enclose their name and address with enquiries. Merberlen Ltd (whose products were reviewed in our October issue) would like to hear from A. C. Weekes and an anonymous reader in Pontypool, both of whom sent for catalogues recently without providing the necessary information for a reply!



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Letters to the Editor

Letters to the Editor can only be answered in the magazine. Readers whose letters are published each receive a free Airfix plastic construction kit of their choice. We are always pleased to receive your comments and pictures, which will be considered for publication. Submitted material and pictures can only be returned if accompanied by a stamped addressed envelope, and the Editor cannot accept responsibility for safe keeping of any such contributions, neither does he necessarily agree with comments expressed by correspondents in the letters column.

Military matters

I SHOULD like to compliment C. O. Ellis on his military modelling articles. However, I have one criticism. In general his vehicles look much too clean! Mr Ellis has mentioned camouflage netting and other paraphernalia with which most military vehicles are draped, but an equally important factor when considering 'character' in this type of model is the paintwork.

In general we assume military vehicles to be painted all over in the appropriate camouflage colour/colours. However, close examination of any photos soon shows this to be untrue. A case in point is the Bren Carrier photos (September issue). An obvious point which Mr Ellis has omitted in painting his models is the rubber-tired wheels, noticeable particularly on the Afrika Corps vehicle, and the fact that paint soon strips off the teeth on driving sprockets, leaving the natural metal exposed.

Another point is the actual vehicle colour. Most vehicles soon become dusty and greasy, even in peace time, and in general basic colours can be 'toned' to give a slightly scruffy appearance, though, as with most 'simple' effects in painting, this should be done with some care. Chipped paintwork round hatches and engine covers, and exhaust stains further help to remove the general toy-like quality of even the most careful conversion and, though several attempts may be required to get the right effect, not over-done but noticeable, the extra time taken is well worthwhile.

Michael J. Moore, Lenzie, Glasgow.

C. O. Ellis writes: 'The main purpose of the model photographs is to show constructional features, and for this reason camouflage nets and other accessories which break up the outline are deliberately omitted when the pictures are taken. I would not agree that a model need necessarily be given a "scruffy" and weather-beaten appearance; it is largely a matter of choice, depending on the

operational conditions and circumstances you wish to represent. The second picture on page 16 of our September issue, for example, shows a brand-new Carrier on patrol, in what is actually a semi-gloss finish.

Story of a bee

IN the October issue of AIRFIX MAGAZINE you published a letter from Mr Bowyer, who wrote about the caterpillar in the pitot tube. I would like to tell you what happened when my father was in India.

Just after a Lockheed Hudson had taken off, the pilot noticed that the airspeed indicator was not registering. He landed with difficulty, and explained the situation. Mechanics checked and rechecked all the equipment, but they could not find any fault. The ground crew were dumbfounded. Then a mechanic noticed an insect flying in and out of the pitot tube, and decided to investigate.

Eventually the ground crew found that the insect was a certain type of bee which laid its eggs in any convenient hole and then blocked up the entrance with mud!

S. C. Smith, Hazel Grove, Cheshire.

Mustang converted

READERS may be interested in my conversion of the Airfix P51D Mustang to a Mark I, as used by the RAF during World War 2. This involves removal of the rear upper portion of the fuselage and its replacement by balsa wood. This can be shaped *in situ* to the new profile. Additionally, an air intake is required



Reader L. G. Hewson made this Mark I Mustang from the Airfix kit, and gives details in his letter.

along the top of the engine nacelle and this can be done with a strip of balsa.

The most difficult part of the conversion was the manufacture of the new cockpit canopy. However, this was done by fashioning a piece of balsa wood to the shape of the required canopy and setting this in wet Keenes cement. When dry, the balsa wood was removed, a small piece of scrap lead melted and poured into the cement mould and a cup hook inserted into the molten lead to serve later as a handle. When cold, the lead was removed and whittled down with a sharp knife to the inside proportions of the canopy. The lead and the cement then provided the two halves of the mould.

A piece of transparent polystyrene (from a broken 'frig' box) was heated six or seven inches above a gas burner until it was limp, then it was placed over the cement mould and the lead pressed home. It's a good idea to cut out a couple of wedges from the polystyrene, with the points at each corner of the windscreen prior to moulding, so as to avoid curling at the edges. A little trial and error soon perfected this method.

Thus was produced a Mark I Mustang which was finished as AG633 F-XV. This particular machine was part of the equipment of an Army Co-operation squadron in 1942.

L. G. Hewson, Twickenham, Middx.

Israeli Mustang

FOR those readers who, like myself, are 'schemes addicts' perhaps the following will be of interest. A Mustang in Israeli markings makes a pleasing addition to any collection, and I would suggest one of the 25 P51Ds that were transferred from the Swedish AF. Colour scheme was olive drab on upper surfaces and neutral grey underneath, OD spinner and black propeller blades with yellow tips. The national markings were a white disc with a pale blue star of David superimposed. They occupied

positions on upper and lower wing surfaces and on fuselage sides. The code number 146 was painted white and positioned aft of the fuselage roundel in 24 inch high characters.

How about a Liberator in Australian markings? The one I have in mind was a B24J with an overall bare metal finish, and an olive drab panel in front of the cockpit. The propeller boss was bare metal and the blades black with yellow tips. The national marking was a blue/white roundel, and occupied the usual six positions on wing and fuselage. A blue/white fin flash, with white to the fore, appeared on both sides of each fin, to the front on the inner faces and to the rear on the outer faces. Code letters were painted in black and read MJ-W starboard and W-MJ port; serial number was also black and was A72-XX, the last two letters being unknown. A black 'V' appeared on the outer face of each fin, and served as a formation marking.

Thanks for a marvellous, unbiased magazine, and a superb range of kits, which I trust will continue to expand.

Robin M. Algar, London, SE20.

First-hand details

AIRFIX have used the actual aeroplane which I flew in 1942/3 as the basis for their kit of a Boston III. Readers might be interested to learn about some of the activities of this aircraft and 88 Squadron at that stage of the war.

Boston II 'U' Uncle belonged to 'B' Flight 88 Squadron and was flown by me on operations over France and the Low Countries from October, 1942, until February 1943, when the Squadron was re-equipped with the later III A version. The Boston IIIs were then, I believe, sent out to North Africa as replacements for the Squadrons operating in that theatre.

No 88 Squadron was engaged in high-level fighter-escorted 'circuses' to stimulate fighter reaction from the German Luftwaffe, and also on unescorted low-level strikes against pinpoint targets in France, Holland and Belgium. The most interesting of the latter operations which 'U' Uncle took part in was on December 6, 1942 when, on that Sunday lunchtime, 92 aircraft of No 2 Group attacked the Philips electrical and radio works at Eindhoven, Holland, from a low level. The RAF Operational Film Unit, which flew with 88 Squadron on that occasion, produced a spectacular newsreel film of the raid.

Wing Commander J. E. Pelly Fry,

December, 1964

the Commanding Officer of 88 Squadron, was awarded the DSO for leading the attack with six aircraft from 'A' Flight at roof-top height. Simultaneously, 'B' Flight of the Squadron, led by 'U' Uncle, attacked the factory from 1,500 feet. Apart from 36 Boston aircraft from Nos 88, 107 and 226 Squadrons, there were Lockheed Venturas and De Havilland Mosquitos, which followed closely in successive waves. Very careful timing and routing was needed because of the different speeds of these three types of aircraft. Minimum casualties were caused in Eindhoven by reason of the time of the attack. Production of radio and equipment was disrupted for many months. Twelve of our aircraft were lost, none from 88 Squadron.

J. H. Reeve, DFC, Cambridge.

New Zealand Corsairs

I HAVE just finished reading the August edition of your magazine, and was particularly impressed with the Profile on the Corsair. Having had the opportunity to examine the remains of the last of the NZ Corsairs, I thought that your readers might be interested in the colour schemes of some of these aircraft.

Firstly, they are all Goodyear-built FG1-Ds, coloured dark blue overall which has faded to a purplish blue on the upper surfaces. The markings of these aircraft are as follows; NZ 5332, 4 on both sides of the engine cowlings and front leg doors in yellow (4 as I have written it) black prop boss. NZ 5326, silver prop boss, 326 on fin tip in yellow. NZ 5315, silver prop boss, 315 on fin tip and both sides of cowlings in yellow. NZ 5612, dark blue prop boss, 612 on fin tip in yellow, frameless, F4U-4 type canopy. All these aircraft have a well-used look about them and have had the arrester hooks removed.

P. G. M. Dingwall,
Whangarei, New Zealand.

Halifax markings

FIRSTLY, may I congratulate Airfix for their wonderful Corsair kit. It really makes up into a fine model and the recent Profile on the Corsairs was very good indeed.

Now I would like to help Mr Kaupinen, who (in the July issue) requested information on Halifax markings. The Halifax he described first is not a Mk 3 but a Mk 6 of 466 Squadron (RAAF). One of these was coded HD-W, and was serialled RG346. This has three hori-

zontal stripes in yellow on a black fin and rudder. I could not find the serial of Z5-F, but Z5-J of the same squadron was serialled MZ431. All Halifaxes of this squadron had three thin yellow vertical stripes on the black fin.

I could not find anything else except that No 10 Squadron, based at Melbourne, had Halifaxes coded ZA. But no definite design was carried and one can find many different examples, such as three vertical yellow stripes, two or three horizontal yellow stripes, or a red hollow diamond.

When finishing such Halifax markings one must bear in mind that the wavy line between the camouflage of the upper and lower surfaces had long been abolished, with the only exception of NP-C, the example given by Airfix in their kit. Moreover, these fin markings were carried on the outside only of the fin with the fin stripes (red-white-blue) superimposed, sometimes with a yellow frame.

Richard Caruana, Paola, Malta GC.



Unusual farewell present for pop-singer Roy Orbison before he flew back to America after his recent British tour was an armful of Airfix kits, presented by Vivienne Crossland, secretary of his English fan club. She contacted Airfix Products with an SOS for, 'A special present from Roy Orbison fans'. The bumper bundle was delivered to his hotel room, where 28-year-old Roy said, 'I'm a confirmed model maker from way back. All I want now is time to build them!'

Matt varnish

I WOULD like to pass on the following tip to your readers. Having had a lot of trouble with matt varnish, I have finally found an answer. From my local art supply shop I got a bottle of artist's matt varnish. This is an opaque jelly; when stood in hot water it melts into

Continued on next page

Letters to the Editor

Continued

a clear liquid which is easily painted on to the model. It gives a really good matt finish to gloss or matt paints and transfers. Before using, allow at least 24 hours for previous paints to dry.

Congratulations on the new Airfix Gnat trainer; this is one of the few jets I have built. I know that there are many suggestions as for models, but certain omissions surprise me. The three oldest serving jet aircraft are the Gloster Meteor, De Havilland Vampire and Lockheed P80 Shooting Star, versions of all three still being in use. So how about these from Airfix?

L. K. Hughes, Emsworth, Hants.

Miniature motor

FIRST of all, thanks to Airfix for the new Catalina kit, which fills a long standing gap, in modelling as well as it did over the Atlantic!

Some time ago, you referred to some of the Faller trackside kits, but I was rather surprised to see no mention of

a small but very useful electric motor produced by Faller. This is a 3.6 volt motor, about as long as a matchstick and thinner than a cigarette, and so it will fit comfortably into a variety of Airfix fuselages and engine nacelles. The price of the motor I bought was 4s, and it seems to me to be ideal for motorising 1:72 scale kits.

Rev H. Bamber, Yardley Hastings, Northampton.

Two tips

ALTHOUGH I am only a newcomer to AIRFIX MAGAZINE, having discovered it in May, 1963, I enjoy reading it immensely and find it interesting.

I have just tried the last method of obtaining fine lines on cockpit canopies, described by Alan W. Hall in the October, 1963, issue. I congratulate him on this method, as I find it extremely successful and realistic.

Here is a useful tip which could possibly be an old one, but I do not think it has been mentioned before in AIRFIX MAGAZINE. When assembling the undercarriage of a model aircraft, first place the wheel on to the under-

carriage leg (after painting), and then use a hot pin to flatten the end of the axle so that the wheel can revolve freely without falling off. Lastly, repeat the procedure with the other undercarriage. This method can be used in such kits as the Defiant, Zero, Corsair, and Walrus.

Another tip is to save small medicine and sauce bottle tops to mix paints in.

Finally, I should like to add to the ever-growing list of suggestions for future plans for new Airfix aircraft models. If possible, I would like to see among the ranks some more Japanese and Italian aircraft types, especially the Kawasaki Ki, 45 Toryu, the Nakajima Ki, 84 Hayate, and the Macchi C, 202 Folgore.

L. Carter, Hayle, Cornwall.

Pen-friends wanted

THE following readers have written to the Editor requesting pen-friends. Robert O'Donovan (13), of 825 Newberry Road, Middletown, PA, USA, would like to correspond with a 13-year-old English boy willing to exchange military models and ideas. C. F. Fitzgerald (17), of 25 Ajax Drive, Sunny Bank, Bury, Lancs, wants a French or American penpal of similar age, interested in military vehicles, aircraft and warships. Interested readers are invited to establish contact direct, at the addresses given.

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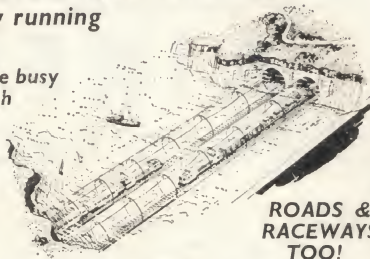
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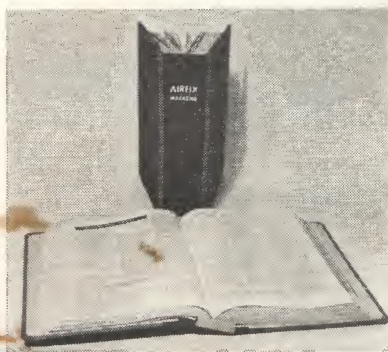
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